UNITED STATES DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES

BIBLIOGRAPHY OF SCIENTIFIC AND INDUSTRIAL REPORTS

Vol. 9 April 30, 1948 No. 5

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* Indicates that reports in the BIOS, CIOS, and FIAT series are deposited in the Library of Congress Depository Libraries. For a complete list of these libraries, see page facing page 1, volume 5, of this Bibliography.

In addition to the indexes described on the back cover of this Bibliography, the following reference works are available from the Office of Technical Services:

PB L 86000. BLACKBURN, ARLENE and others. FIAT reports: Bibliography and index of reports resulting from American investigations of German industry. Jan 1948. 95 p. Price: $5.00

PB L 87782. HOLLOWAY, O. WILLARD. American and British atomic energy reports: A list of reports on atomic energy released by the Office of Technical Services. Feb 1948. 30 p. Price: 75¢

PB L 58101-R. SWIFT, GRACE. Government document series, analyzed by Office of Technical Services, rev. Nov 1947. 45 p. Price: 25¢

PB L 79322. SWIFT, GRACE and ORNE, JERROLD. Subject headings for technical libraries. Jun 1947. 167 p. Price: $1.50

The available copy of PB 32593, "Battery production capacities for automotive purposes in Germany," by Poole (FIAT Final Rept 615), abstracted in volume 2, p. 736, this Bibliography, is incomplete, having only 10 pages. Prices for reproduction of this report are: Microfilm-$1.00 - Photostat-$1.00

Dyes

PB L 84192. BADISCHE ANILIN- UND SODAFABRIK, LUDWIGSHAFEN, GERMANY. Records on dyes. (FIAT Microfilm Reel 1, Frames 1-2148) 1911-1921. 1076 f. Price: Microfilm-$7.00 - Enlargement print-$109.00

This FIAT microfilm reel consists of the 1911-1921 records of the dye department of the Badische Anilin- und Sodafabrik, Ludwigshafen (later to become part of I. G. Farbenindustrie). They deal almost exclusively with dyes and dye intermediates, describing processes, results of research, and analyses of competitors' products. Numerous tables with color examples are reproduced in black and white only. 256 individual reports may be obtained as enlargement prints. Please include PB and page numbers when ordering an individual item. These reports are in German. A list of titles follows: (As a rule, two pages constitute a frame.)

Frames	Title	Price
1-2 PB L 84192	8-Amino-2-naphthol. 1911. In German.	$2.00
3-5 PB L 84192	4-Chloro-2-aminophenol. 1911. In German.	2.00
6-7 PB L 84192	2,4-Dichlorobenzoyl chloride. 1911. In German.	2.00
8-10 PB L 84192	"Hydronblau G" and "R." 1911. In German. Analysis of American samples.	2.00
11-16 PB L 84192	Bleaching agents. 1911. In German.	2.00
17-21 PB L 84192	The dye from p,p'-diaminodiphenylurea and 2 moles of m-aminophenol. 1911. In German.	2.00
22-27 PB L 84192	The dye from 4-chloro-2-aminophenol and m-aminophenylglycine. 1911. In German.	2.00
28-33 PB L 84192	The monoazo dye from 4-chloro-2-aminophenol-6-sulfonic acid and 2-naphthol. ("Monochromblau R.") 1911. In German.	2.00
34-38 PB L 84192	"Nitroso base A." 1911. In German.	2.00
39-42 PB L 84192	Determination of identifying agent in indigo. 1911. In German.	2.00
43-46 PB L 84192	Blue sulfur dye from methylene violet. 1911. In German.	2.00
47-54 PB L 84192	Glycol. 1911. In German.	2.00
55-64 PB L 84192	"Oxydiaminschwarz IB" and "IR." 1911. In German.	2.00
65-74 PB L 84192	p-Aminophenol. 1911. In German.	2.00
75-76 PB L 84192	Verification of U. S. patent 931598. 1911. In German.	2.00
77-78 PB L 84192	Dinitroresorcinol. 1911. In German. Result of analysis.	2.00
79-87 PB L 84192	Dyes from 4,4'-diaminodiphenyldiethylurea. 1911-1912. In German.	2.00
88-93 PB L 84192	o-Nitroaniline with 2-naphthol. 1911. In German.	2.00
94-96 PB L 84192	"Hydronblau." 1911. In German.	2.00
97-107 PB L 84192	Chloroaldehyde. 1911. In German.	2.00
108-110 PB L 84192	Black dyes (p-phenylenediamine). 1911. In German.	2.00
111-113 PB L 84192	Orange dyes. 1911. In German. Results of analyses.	2.00
114-121 PB L 84192	Indamines and indophenols. 1911. In German.	2.00
122-126 PB L 84192	Analysis of Tetrazo Chlorine Orange G. 1911. In German.	2.00
127-129B PB L 84192	H. H. Hodgson's offer. 1911. In German.	2.00
130-141 PB L 84192	Discussion of patent situation. 1911. In German.	2.00
142-150 PB L 84192	"Zinnoberscharlach G" and "R." 1911. In German.	2.00
151-166 PB L 84192	Synthetic tanning agents. 1911-1912. In German.	2.00
167-170 PB L 84192	"16695 - Noir M." 1912. In German.	2.00
171-173 PB L 84192	Black basic monoazo dyes. 1912. In German.	2.00
174-182 PB L 84192	"Chromatbraun" from 4-nitro-2-aminophenol-6-sulfonic acid and 2-naphthol. 1912. In German.	2.00
183-187 PB L 84192	"Direktbraun 3 GO." 1912. In German.	2.00
188-192 PB L 84192	2,4-Dinitroaniline. 1912. In German.	2.00
193-197 PB L 84192	Blue chrome dye. 1912. In German.	2.00
198-204 PB L 84192	Determination of dinitrotoluene in nitrotoluene. 1912. In German.	2.00
205-210 PB L 84192	"Vesuvin." 1912. In German.	2.00
211-215 PB L 84192	"Brillantscharlach G2R." 1912. In German.	2.00
216-219 PB L 84192	6-Nitro-2-aminophenol-4-sulfonic acid. 1912. In German.	2.00
220-222 PB L 84192	Patent application F 32692 IV/8a. Höchst, fiber-developed dyes. 1912. In German.	2.00
223-240 PB L 84192	"Küpenorange II." 1912. In German.	2.00
241-243 PB L 84192	"Orange R." 1912. In German.	2.00
244-248 PB L 84192	"Oxidation Brown" and "Khaki." 1912. In German.	2.00
249-252 PB L 84192	"Hydroviolet B." 1912. In German.	2.00
253-254 PB L 84192	"Indanthren-Goldorange RN." 1912. In German. Title page only.	2.00
255-257 PB L 84192	Result of analysis. 1912. In German.	2.00
258-263 PB L 84192	Condensation product. 1912. In German.	2.00
264-268 PB L 84192	Arylidoquinones. 1912. In German.	2.00

Dyes (contd)

269-275 PB L 84192 — 4-Chloro-4'-amino-biphenyl. 1912. In German. 2.00

276-283 PB L 84192 — New vat dyes from diphthaloyl-acridones. 1912. In German. 2.00

283A-285 PB L 84192 — Examination of soap. 1912. In German. 2.00

286-291 PB L 84192 — "Helindongelb CG" and "Helindonbraun CR." 1912. In German. 2.00

292-302 PB L 84192 — "Hydrongelb G." 1912. In German. 2.00

303-306 PB L 84192 — "Chromlederschwarz F." 1912. In German. 2.00

307-322 PB L 84192 — Trisazo dyes. 1912. In German. 2.00

323-326 PB L 84192 — Yellowish red to bluish red dyes. 1912. In German. 2.00

327-330 PB L 84192 — Derivatives of 2-amino-5-hydroxynaphthalene-7-sulfonic acid and of 2-amino-8-hydroxynaphthalene-6-sulfonic acid. 1912. In German. 2.00

331-345 PB L 84192 — The effect of pyridine on iron. 1912. In German. 2.00

346-375 PB L 84192 — Vat dyes of the anthraquinone series. 1912. In German. 3.00

376-390 PB L 84192 — "Küpenbraun" from benzidine. 1912. In German. 3.00

391-395 PB L 84192 — Monovalent phenols. 1912. In German. 2.00

396-399 PB L 84192 — These frames are duplicates of preceding item.

400-406 PB L 84192 — 2-Amino-8-naphthol-3,6-disulfonic acid. 1912. In German. 2.00

407-416 PB L 84192 — Verification of patent applications. 1912. In German. 2.00

417-422 PB L 84192 — "Cyanolblau R" and "B." 1912. In German. 2.00

423-427 PB L 84192 — Indigo paste Höchst. 1913. In German. 2.00

428 PB L 84192 — This frame is a duplicate of frame 427.

429-432 PB L 84192 — "Küpenblau I." 1913. In German. 2.00

433-437 PB L 84192 — "Pigmentviolett BB." 1913. In German. 2.00

438-443 PB L 84192 — K-acid. 1913. In German. 2.00

444-446 PB L 84192 — Verification of patent application. 1913. In German. 2.00

447-451 PB L 84192 — 1-Naphthylamine-4,6,8-trisulfonic acid. 1913. In German. 2.00

452-475 PB L 84192 — Condensation of carbazole-indophenol and 1,5-aminonaphthol. 1913. In German. 3.00

476-480 PB L 84192 — "Orelarot R," "GG," and "RB." 1913. In German. 2.00

481-486 PB L 84192 — "Chromogenviolett B." 1913. In German. 2.00

487-494 PB L 84192 — "Sambesischwarz D" = "Diazoechtschwarz SD." 1913. In German. 2.00

495-497 PB L 84192 — Aceto-p-phenylene diamine. 1913. In German. 2.00

498-500 PB L 84192 — "Parazol-Grau" (Cassella). 1913. In German. 2.00

501-506 PB L 84192 — Bisulfite of "Litholrot." 1913. In German. 2.00

507-510 PB L 84192 — "Naphthogenblau 2 R." 1913. In German. 2.00

511-515 PB L 84192 — "Blau BXX." 1913. In German. 2.00

516-520 PB L 84192 — 3,3'-Dinitro-4,4'-diaminodiphenylmethane, and its condensation product with formaldehyde. 1913. In German. 2.00

521-523 PB L 84192 — Potash melts. 1913. In German. 2.00

524-527 PB L 84192 — "Litholrot RS." 1913. In German. 2.00

528-535 PB L 84192 — Dye from "o-Tolidin-m-disulfosäure" and salicylic acid. 1913. In German. 2.00

536-543 PB L 84192 — Chloranil. 1913. In German. 2.00

544-548 PB L 84192 — "Violet 7682." 1913. In German. 2.00

549-554 PB L 84192 — Benzylchloride. 1913. In German. 2.00

555-560 PB L 84192 — "Nitrosäure III"; "Chromatbraun." 1913. In German. 2.00

561-565 PB L 84192 — Dialkylaminobenzyl alcohols. 1913. In German. 2.00

566-578 PB L 84192 — Vat dyes from naphthalene derivatives. 1913. In German. 2.00

579-585 PB L 84192 — Dyes soluble in sodium sulfide. 1913. In German. 2.00

586-602 PB L 84192 — "Küpenblau I." 1913. In German. 2.00

603-606 PB L 84192 — Tanning agents. 1913. In German. 2.00

607-611 PB L 84192 — The ability of phenol alkyl ethers to couple with diazonium compounds. 1913. In German. 2.00

612-620 PB L 84192 — Oxalyl chloride. 1913. In German. 2.00

621-638 PB L 84192 — "Küpenblau 17" (solubility in Na_2S). 1913. In German. 2.00

639-643 PB L 84192 — Experiments for greens. 1913. In German. 2.00

644-652 PB L 84192 — Substantive red dye. 1913. In German. 2.00

653-669 PB L 84192 — Yellow vat dye. 1913. In German. 2.00

670-672 PB L 84192 — "Schwefelblau L" and "Schwefelindigo BA." 1913. In German. 2.00

673-678 PB L 84192 — Chloranil. 1913. In German. 2.00

679-681 PB L 84192 — Naphthol AS. 1913. In German. 2.00

682-690 PB L 84192 — Diamino-dibenzylsulfone and derivatives. 1913. In German. 2.00

Dyes (contd)

691-697 PB L 84192 — Yellow monoazo dyes. 1913. In German. 2.00

698-716 PB L 84192 — Substitute for "Hansagrün." 1913. In German. 2.00

717-720 PB L 84192 — Bluish green lakes. 1913. In German. 2.00

721-722 PB L 84192 — Result of analysis. 1913. In German. 2.00

723-732 PB L 84192 — Azo dyes from "m-n-Azoxybenzoyl-J-Säure." 1913. In German. 2.00

733-738 PB L 84192 — "Walkscharlach G." 1913. In German. 2.00

739-744 PB L 84192 — Substitute for "Hydronblau R." 1913. In German. 2.00

745-748 PB L 84192 — "Chromlederschwarz F." 1913. In German. 2.00

749-751 PB L 84192 — Analysis of "Soluble Germina." 1914. In German. 2.00

752-757 PB L 84192 — Color strength of benzophenone dyes. 1914. In German. 2.00

758-820 PB L 84192 — Pigment colors. 1914. In German. 5.00

821-867 PB L 84192 — Micro-elementary analysis. 1914. In German. 4.00

868-870 PB L 84192 — "Azo Marron Toner." 1914. In German. 2.00

871-877 PB L 84192 — Analysis of technical oxalyl-chloride. 1914. In German. 2.00

878-881 PB L 84192 — "Neradol N." 1914. In German. 2.00

882-886 PB L 84192 — "Kryogengrün GX." 1914. In German. 2.00

887-891 PB L 84192 — Chloranil. 1914. In German. 2.00

892-897 PB L 84192 — Pigment colors. 1914. In German. 2.00

898-905 PB L 84192 — Incomplete item; complete in Frames 943-952, below.

906-942 PB L 84192 — Tanning agents "Neradol D" and "N." 1914. In German. 3.00

943-952 PB L 84192 — Physical properties of metallic catalysts. 1914. In German. 2.00

953-956 PB L 84192 — "Nerol B." 1914. In German. 2.00

957-960 PB L 84192 — "Carbazol-Echtentwickler B." 1914. In German. 2.00

961-963 PB L 84192 — These frames are duplicates of preceding item.

964-966 PB L 84192 — These frames are partial duplication of following item.

967-971 PB L 84192 — "Dianilechtbraun B." 1914. In German. 2.00

972-975 PB L 84192 — "Zanonschwarz X." 1914. In German. 2.00

976-979 PB L 84192 — These frames are duplication of preceding item.

980-981 PB L 84192 — "Neradol N." 1914. In German. 2.00

982-1005 PB L 84192 — "Carbazolindophenol." 1914. In German. 3.00

1006-1008 PB L 84192 — "Halbwollbraun 3B." 1914. In German. 2.00

1009-1011 PB L 84192 — "Neradol D." 1914. In German. 2.00

1012 PB L 84192 — Result of analysis of carbolic acid. 1914. In German. 2.00

1013-1021 PB L 84192 — Azo dyes from carbazole derivatives. 1914. In German. 2.00

1022-1030 PB L 84192 — These frames are duplicates of preceding item.

1031-1041 PB L 84192 — Amino bases for azo dyes developed on the fiber. 1914. In German. 2.00

1042-1048 PB L 84192 — These frames are triplication of part of preceding item.

1049-1051 PB L 84192 — "Naphtol NA." 1914. In German. 2.00

1052-1055 PB L 84192 — "Echtlichtorange 3 G" and "GG." 1914. In German. 2.00

1056-1059 PB L 84192 — These frames are duplicates of the preceding item.

1060-1063 PB L 84192 — Dicyclohexylamine compounds. 1914. In German. 2.00

1064-1070 PB L 84192 — 4-Chloro- and 2,4-dichloro-benzoyl-1,7-aminonaphthol. 1914. In German. 2.00

1071-1074 PB L 84192 — Red wool dye. 1914. In German. 2.00

1075-1078 PB L 84192 — These frames are duplicates of the preceding item.

1079-1084 PB L 84192 — "Acanthrenchinon." 1914. In German. 2.00

1085-1086A PB L 84192 — "Lake Yellow 28227." 1914. In German. 2.00

1087-1099 PB L 84192 — Azo dyes. 1914. In German. 2.00

1100-1104 PB L 84192 — "Lezza," Chinese dye from a plant. 1914. In German. 2.00

1105-1116 PB L 84192 — Naphthalic acid anhydride and imide. 1914. In German. 2.00

1117-1120 PB L 84192 — Solvent "Byk." 1914. In German. 2.00

1121-1124 PB L 84192 — Substitute for amylacetate. 1914. In German. 2.00

1125-1185 PB L 84192 — Agitators and baffles. 1914. In German. 4.00

1186-1245 PB L 84192 — These frames are duplicates of the preceding item.

1246-1247 PB L 84192 — p-Diazo-p'-amino-biphenyl. 1914. In German. 2.00

1248-1254 PB L 84192 — 4-Bromo-1-amino-2-sulfonic acid. 1914. In German. 2.00

1255-1257 PB L 84192 — These frames are duplicates of part of preceding item.

1258-1261 PB L 84192 — Blue wool dye. 1914. In German. 2.00

1262-1264 PB L 84192 — These frames are duplicates of the preceding item.

1265-1284 PB L 84192 — Azo dyes. 1914. In German. Tables. 2.00

1285-1286 PB L 84192 — 2,4,6-Trinitroresicole. 1914. In German. 2.00

Dyes (contd)

1287-1289 PB L 84192 — Microdetermination of bromine. 1914. In German. Handwritten. 2.00

1290-1291 PB L 84192 — Dichloroacetone. 1914. In German. 2.00

1292-1299 PB L 84192 — 3,3'-Dinitro-4,4'-diaminobenzophenone. 1915. In German. 2.00

1300-1306 PB L 84192 — These frames are duplicates of the preceding item.

1307-1319 PB L 84192 — Tanning agents. 1915. In German. 2.00

1320-1323 PB L 84192 — Carbazol as azo component. 1915. In German. 2.00

1324-1328 PB L 84192 — Chromschwarz. 1915. In German. 2.00

1329-1338 PB L 84192 — Lubricant from gas oil. 1915. In German. 2.00

1339-1421 PB L 84192 — "Diamantgrün G" and "Viktoriagrün." 1915. In German. 6.00

1422-1426 PB L 84192 — Ink and stain remover. 1915. In German. 2.00

1427-1432 PB L 84192 — "Eriochromverdon S." 1915. In German. 2.00

1433-1434 PB L 84192 — These frames are duplicates.

1435-1439 PB L 84192 — "Rapidechtrot GL." 1915. In German. 2.00

1440-1441 PB L 84192 — These frames are duplicates.

1442 PB L 84192 — "Neradol D" and "ND." 1915. In German. Title only. 2.00

1443-1448 PB L 84192 — Vat dye. 1915. In German. 2.00

1449-1467 PB L 84192 — The effect of nitrogen oxides on primary aromatic amines. 1916. In German. 3.00

1468-1471 PB L 84192 — "Calicoflavin R." 1916. In German. 2.00

1472-1475 PB L 84192 — Azo dyes. 1916. In German. 2.00

1476-1490 PB L 84192 — "Carbazolwollgrün S." 1916. In German. 2.00

1491-1518 PB L 84192 — Neradol D. 1916. In German. 3.00

1519-1522 PB L 84192 — Reduction of acetaldehyde. 1916. In German. 2.00

1523-1541 PB L 84192 — Production of glycerol. 1917. In German. 2.00

1542-1561 PB L 84192 — These frames are duplicates of preceding item, but more legible and with additional drawing. 2.00

1562-1583 PB L 84192 — Fat decomposing agents as soap substitutes. 1917. In German. 3.00

1584-1613 PB L 84192 — Ethylarsine compounds. 1917. In German. 3.00

1614-1617 PB L 84192 — Tanning agent. 1917. In German. 2.00

1618-1623 PB L 84192 — "Dickoxyd." 1917. In German. 2.00

1624-1632 PB L 84192 — Alcohol from calcium carbide. 1917. In German. 2.00

1633-1635 PB L 84192 — Patent verification. 1917. In German. 2.00

1636-1640 PB L 84192 — 1-Chloro-2-amino-anthraquinone. 1917. In German. 2.00

1641-1653 PB L 84192 — Benzylchloride sulfonic acid. 1917. In German. 2.00

1654-1658 PB L 84192 — Carbon dioxide from waste gases. 1918. In German. 2.00

1659-1664 PB L 84192 — "Corcinal." 1919. In German. 2.00

1665-1668 PB L 84192 — Titration of hydroxylamine. 1919. In German. 2.00

1669-1676 PB L 84192 — "Becoextract." 1919. In German. 2.00

1677-1682 PB L 84192 — "Curacit." 1919. In German. 2.00

1683-1689 PB L 84192 — "Syntannat." 1919. In German. 2.00

1690-1693 PB L 84192 — "Boxin A" and "B." 1919. In German. 2.00

1694-1701 PB L 84192 — Pure carbon dioxide. 1919. In German. 2.00

1702-1711 PB L 84192 — Formaldehyde and methylalcohol from formic acid. 1919. In German. 2.00

1712-1725 PB L 84192 — Camphor production. 1919. In German. 2.00

1726-1728 PB L 84192 — "Ordoval G." 1919. In German. 2.00

1729-1740 PB L 84192 — Monochloroacetic acid. 1919. In German. 2.00

1741-1752 PB L 84192 — Synthetic tanning agents. 1919. In German. 2.00

1753-1772 PB L 84192 — Camphor from borneol and isoborneol. 1919. In German. 2.00

1773-1777 PB L 84192 — "Ewol." 1919. In German. 2.00

1778-1782 PB L 84192 — These frames are duplicates of the preceding item.

1783-1788 PB L 84192 — Temperature increases in catalytic reduction of nitrobenzene with hydrogen. 1920. In German. 2.00

1789-1807 PB L 84192 — "Naphtolgelb S." 1920. In German. 3.00

1808-1820 PB L 84192 — 1,4-Naphthoquinone. 1920. In German. 2.00

1821 PB L 84192 — Letter concerning the price of chromic acid. 1920. In German. 2.00

1822-1829 PB L 84192 — 4,4'-Diaminobenzophenone. 1920. In German. 2.00

1830-1844 PB L 84192 — Transformation of hydrocarbons into carbonyl compounds or acids. 1920. In German. 2.00

1845-1852 PB L 84192 — Criticism of U. S. Patent 1,302,011. 1920. In German. 2.00

1853-1857 PB L 84192 — Pure copper and nickel carbonates from spent catalyst. 1920. In German. 2.00

Dyes (contd)

1858-1861 PB L 84192 — Catalytic oxidation of acenaphthalene. 1920. In German. 2.00

1862-1863 PB L 84192 — Supplement to report, frames 1830-1844. In German. 2.00

1864-1872 PB L 84192 — 8-Amino-2-naphthol as azo dye component. 1920. In German. 2.00

1873-1876 PB L 84192 — These frames are duplicates.

1877-1880 PB L 84192 — Naphthanthracene sodium sulfonate. 1920. In German. 2.00

1881-1885 PB L 84192 — "Echtrot GL" base and "3 GL" base. 1920. In German. 2.00

1886-1888 PB L 84192 — Condensation product. 1920. In German. 2.00

1889-1891 PB L 84192 — These frames are duplicates of the preceding item.

1892-1899 PB L 84192 — These frames are duplicates of the following item (less legible).

1900-1907 PB L 84192 — Monoazo dye from 4-aminoanisole-2-sulfonic acid and salicylic acid. 1920. In German. 2.00

1908-1914 PB L 84192 — Oxazines and cyanamides as Naphthol AS components. 1920. In German. 2.00

1915-1920 PB L 84192 — Verification of German patents 273322 and 282492. 1920. In German. 2.00

1921-1927 PB L 84192 — Cyclohexanol acetate. 1920. In German. 2.00

1928-1932 PB L 84192 — "Tannol." 1920. In German. 2.00

1933-1944 PB L 84192 — 5-Methyl-o-anisidine. 1920. In German. 2.00

1945-1956 PB L 84192 — "Corinal-Worms." 1921. In German. 2.00

1957-1961 PB L 84192 — "Echtscharlach R" base. 1921. In German. 2.00

1962-1963 PB L 84192 — "Naphtol BS." 1921. In German. 2.00

1964-1977 PB L 84192 — Nitration of acetanilide. 1921. In German. 2.00

1978-1983 PB L 84192 — "Echtscharlachsalz R" and "Echtrotsalz GL." 1921. In German. 2.00

1984-1993 PB L 84192 — 4,4'-Tetramethyldiamidothiobenzophenone. 1921. In German. 2.00

1994-1997 PB L 84192 — "Indanthrenblau BS," "2GS," "GCD." 1921. In German. 2.00

1998-2002 PB L 84192 — Supplement to report, frames 1945-1956 ("Corinal-Worms"). In German. 2.00

2003-2006 PB L 84192 — Reduction (of nitrobenzene and phenol) under pressure. 1921. In German. 2.00

2007-2009 PB L 84192 — Volatility of solvents. 1921. In German. 2.00

2010-2017 PB L 84192 — Catalytic reduction under pressure. 1921. In German. 2.00

2018-2027 PB L 84192 — Anthraquinone. 1921. In German. 2.00

2028-2032 PB L 84192 — "Orelarot R2B." 1921. In German. 2.00

2033-2038 PB L 84192 — m-Nitrobenzoylchloride. 1921. In German. 2.00

2039-2044 PB L 84192 — These frames are duplicates of the preceding item.

2045-2049 PB L 84192 — Determination of small amounts of carbon monoxide by means of palladous chloride. 1921. In German. 2.00

2050-2053 PB L 84192 — Nitro compound. 1921. In German. 2.00

2054-2060 PB L 84192 — "Neradol ND." 1921. In German. 2.00

2061-2072 PB L 84192 — 2,6-Dichlorobenzaldehyde. 1921. In German. 2.00

2073-2107 PB L 84192 — Green vat dye. 1921. In German. 3.00

2108-2110 PB L 84192 — Perimidine of 2-hydroxy-1-naphthoic acid. 1921. In German. 2.00

2111-2113 PB L 84192 — These frames are duplicates of the preceding report.

2114-2130 PB L 84192 — "Carbitane." 1921. In German. 2.00

2131-2140 PB L 84192 — "Nitrosylchloride." 1921. In German. 2.00

2141-2148 PB L 84192 — Reagent for acids. 1921. In German. 2.00

PB L 73893. I. G. FARBENINDUSTRIE A. G. A collection of chemical reports. (FIAT Microfilm Reel H-77, Frames 6051-6850) 1929-1939. 800 f. Price: Microfilm-$6.00 - Enlargement print-$80.00.
This FIAT microfilm reel contains reports on miscellaneous research in the field of organic chemistry, chiefly on dyes and dye intermediates. Individual reports or groups of related reports are available as enlargement prints, as listed below. Please give PB and frame numbers when ordering them. In German.

Frames	Title	Price
6051-6061 PB L 73893	Light-absorbing agents. 1939. In German.	$ 1.50
6062-6070 PB L 73893	Intermediates. 1939. In German.	1.50
6071-6074 PB L 73893	Stabilization of "Chlor-Buna." 1939. In German.	1.50
6075-6076 PB L 73893	Plasticizers. 1939. In German.	1.50
6077-6083 PB L 73893	Monthly reports, 1939-1940. (on textile aids, light-absorbing agents, disinfectants, and intermediates). In German.	1.50
6084-6086 PB L 73893	Reduction of difficultly soluble nitro compounds by means of bisulfite-pyridine. 1929. In German.	1.50
6087-6090 PB L 73893	Preparation of 4-sulfo-anthranilic acid. 1929. In German.	1.50
6091-6093 PB L 73893	4-Hydroxy-2-nitro-toluene-6-sulfonic acid. 1929. In German.	1.50
6094-6096 PB L 73893	2-Hydroxy-carbazole. 1929. In German.	1.50

Dyes (contd)

6097-6098 PB L 73893 — 2,2'-Dinitro-biphenyl. 1930. In German. 1.50

6099-6104 PB L 73893 — 2-Hydroxy-and dihydroxy-carbazole. 1930. In German. 1.50

6105 PB L 73893 — Progress report, 1930. (Only a listing of subjects dealt with). n.d. In German. 1.50

6106-6107 PB L 73893 — Experiments for stabilizing "Variaminblau." 1931. In German. 1.50

6108-6109 PB L 73893 — Tertiary butyl compounds for Naphthol AS. 1931. In German. 1.50

6110-6113 PB L 73893 — Blue bases for Naphthol AS. 1931. In German. 1.50

6114-6119 PB L 73893 — Brown-naphthols. 1932. In German. 1.50

6120-6122 PB L 73893 — "Pharmalblau B" and "Pharmolgelb G." 1932. In German. 1.50

6123-6124 PB L 73893 — "Variaminblau B" and "BG." 1932. In German. 1.50

6125-6130 PB L 73893 — "Diazogen Red G"(Du Pont). 1933. In German. 1.50

6131-6152 PB L 73893 — Blue bases for Naphthol AS. 1934. In German. 2.50
Includes 5 pages of an incomplete item.

6153-6157 PB L 73893 — "Diagen" dyes of Du Pont. 1934. In German. 1.50

6158-6205 PB L 73893 — Monthly reports. 1934-1937. (Miscellaneous dye research, particularly investigations of competitors' products). In German. 5.00

6206-6209a PB L 73893 — 2,5-and 2,8-amino naphthol-disulfonic acids. 1938. In German. 1.50

6210-6213 PB L 73893 — Monthly factory reports, 1938-1939. In German. 1.50
Short listing of plant activities.

6214-6217 PB L 73893 — Mono-benzoylated aromatic diamines as diazo components in Naphthol-AS dyeing. 1929. In German. 1.50

6218-6222a PB L 73893 — Production and fastnesses of some cases for Naphthol-AS dying. 1929. In German. 1.50

6223-6228 PB L 73893 — Symetric disulfamino-or diamino-diarylureas. 1929. In German. 1.50

6229-6231 PB L 73893 — Intermediates for cotton dyes. 1929. In German. 1.50

6232-6234 PB L 73893 — Diamino compounds. 1930. In German. 1.50

6235-6237 PB L 73893 — 2,3-Hydroxy naphthoic acid anilides. 1930. In German. 1.50

6238-6256 PB L 73893 — Research in the Naphthol AS field. 1930-1931. In German. 2.00

6257-6260 PB L 73893 — New sulfochlorides. 1931. In German. 1.50

6261-6265 PB L 73893 — Amino-amyl-sulfo-dialkylamides. 1931. In German. 1.50

6266-6272 PB L 73893 — "Naphthol AS-ITR" = "Echtrot ITR base." 1932. In German. 1.50

6273-6294 PB L 73893 — Monthly factory reports, 1937-1938. In German. 2.50

6295-6299 PB L 73893 — Water-soluble diazo aminocompounds for printing. 1929. In German. 1.50

6300-6307 PB L 73893 — 3-Alkoxy-4-amino-naphthalimides. 1929. In German. 1.50

6308-6310 PB L 73893 — Tests of several bases as diazotization components. 1929. In German. 1.50

6311-6312 PB L 73893 — Water-soluble diamino compounds for printing. 1929. In German. 1.50

6313-6314 PB L 73893 — New stabilisers. 1929. In German. 1.50

6315-6319 PB L 73893 — Production of green tints on the fiber. 1929. In German. 1.50

6320-6323 PB L 73893 — Research in the Naphthol-AS field. 1929. In German. 1.50

6324-6325 PB L 73893 — Water-soluble diamino compounds for printing. 1929. In German. 1.50

6326-6329 PB L 73893 — Reactions of diazo compounds with quinones. 1929. In German. 1.50

6330-6339 PB L 73893 — Research in the Naphthol-AS field. 1930. In German. 1.50

6340-6344 PB L 73893 — Research in the Rapidogen field. 1930. In German. 1.50

6345-6355 PB L 73893 — Research in the Naphthol AS field. 1930. In German. 1.50

6356-6392 PB L 73893 — Research in the Rapidogen dye field. 1931-1933. In German. 4.00

6393-6401 PB L 73893 — Investigation of competitors' products. 1934. In German. 1.50

6402-6410 PB L 73893 — Monthly reports, 1934. In German. 1.50
Miscellaneous dye research.

6411-6413 PB L 73893 — Research in the Rapidogen field. 1935. In German. 1.50

6414-6535 PB L 73893 — Monthly reports. 1935-1938. In German. 12.50
Miscellaneous research, chiefly in the Rapidogen field.

6536-6539 PB L 73893 — Products of condensation of quinones with 1,3-butadiene, its homologues and substitution products. 1929. In German. 1.50

6540-6542 PB L 73893 — 2-Amino - benz thiazoles. 1929. In German. 1.50

6543-6544 PB L 73893 — Basic soaps. 1929. In German. 1.50

6545-6547 PB L 73893 — Grindings of inorganic pigments and oil. 1929. In German. 1.50

6548 PB L 73893 — 4-Amino-diphenylamine-4'-sulfonic acid. 1931. In German. 1.50

6549 PB L 73893 — 2,2'-Dinaphthyl-1,4-1;4'-diquinone. 1931. In German. 1.50

6550-6560 PB L 73893 — Diphenylamine derivatives for Azine dyes. 1931. In German. 1.50

Dyes (contd)

6561-6565 PB L 73893 — Mono benzoylated p-diamines. 1929. In German. 1.50

6565 PB L 73893 — 4-Chloro-1-naphthylamine. 1929. In German. 1.50

6567 PB L 73893 — 4,5-Dichloro-2-toluidine. 1929. In German. 1.50

6568-6569 PB L 73839 — Azines of the type "Wollschtblau." n.d. In German. 1.50

6570 PB L 73893 — Monthly factory report. 1937. In German. 1.50

6571 PB L 73893 — Verification of French patent 807870. 1937. In German. 1.50

6572-6575 PB L 73893 — Mono-4'-nitrobenzoyl-1,4-phenylenediamine. 1937. In German. 1.50

6576-6577 PB L 73893 — Mono-benzoyl-p-phenylenediamine. 1937. In German. 1.50

6578-6602 PB L 73893 — Monthly factory reports. 1937-1939. In German. 2.50

6603 PB L 73893 — Methylene-diresorcinol and methylene-disalicylic acid. 1929. In German. 1.50

6604-6609; 6612 PB L 73893 — Chrome-soga-dyes. 1929. In German. 1.50

6610-6611 PB L 73893 — Chloronaphthylamines. 1929. In German. 1.50

6613-6614 PB L 73893 — 1,3-dimethoxy-4-benzamido-6-nitrobenzene. 1929. In German. 1.50

6615-6616 PB L 73893 — 3-Amino-4-hydroxy-toluene-5-sulfonic acid. 1929. In German. 1.50

6617-6630 PB L 73893 — 2,4-and 2,6-dichlorophenol. 1929. In German. 1.50

6631-6633 PB L 73893 — 4,5-dichloro-o-toluidine. 1930. In German. 1.50

6634-6655 PB L 73893 — Condensation of 5,8-quinoline with compounds having conjugate double bands. 1929-1930. In German. 2.50

6656-6658 PB L 73893 — Methylation of 5,8-dihydro-anthrapyridine-hydroquinone. 1930. In German. 1.50

6659-6660 PB L 73893 — Substituted 2-hydroxyquinolines. 1930. In German. 1.50

6661 PB L 73893 — Experiments with carbazole-2,7-disulfonic acid. 1930. In German. 1.50

6662-6673 PB L 73893 — Derivatives of 5,8-dihydro anthrapyridine-hydroquinone. 1930. In German. 1.50

6674-6679 PB L 73893 — Chlorination, sulfonation and nitration of 4-hydroxy-diphenyl-3-carboxylic acid. 1931. In German. 1.50

6680-6681 PB L 73893 — 5,8-Isoquinolinequinone. 1931. In German. 1.50

6682-6699 PB L 73893 — Amino diphenylsulfones as diazotization components for Naphthol-AS dyes. 1921. In German. 2.00

6700-6717 PB L 73893 — Aminobenzophenone sulfones as diazotization components for Naphthol-AS dyes. 1931-1932. In German. 2.00

6718-6721 — Sulfonated agosalicylic acid, its

PB L 73893 — homologues and substitution products. 1932. In German. 1.50

6722-6741 PB L 73893 — Further results on aminosulfones as diazotization components for Naphthol-AS dyes. 1933. In German. 2.00

6742-6746 PB L73893 — Lakes. 1934. In German. 1.50

6747-6749 PB L 73893 — Research in the Naphthol-AS field. n.d. In German. 1.50

6750-6779 PB L 73893 — Monthly reports, (chiefly on research on Naphthol AS and azo dyes, nitration of sulfones, and lakes. 1934-1935. In German. 3.00

6780-6786 PB L 73893 — Nitration of substituted phenyl-benzyl- and diphenyl sulfones. 1935. In German. 1.50

6787-6850 PB L 73893 — Monthly reports. (On miscellaneous dye research). 1935-1937. In German. 6.50

PB L 74120. I. G. FARBENINDUSTRIE A. G. Directions for the production of dyes and other organic preparations. (FIAT Microfilm Reel CC 110, Frames 1-968) 1938-1944. 968 f. Price: Microfilm-$6.00 - Enlargement print-$97.00
This FIAT microfilm reel contains directions for producing numerous dyes and a number of their intermediates and some other products. Individual sets of directions, listed below, are available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
1-4 PB L 74120	Directions for producing "Algol-blau 6" base. 1942. In German.	$1.50
5-7 PB L 74120	Preliminary directions for producing 3'-aminobenzoyl-5-amino-2-hydroxybenzoic acid. 1942. In German.	1.50
8-10 PB L 74120	Directions for prod. 3-amino-4-methoxybenzyl-3'-carboxy-4'-hydroxyphenylsulfone. 1942. In German.	1.50
11-13 PB L 74120	Directions for prod. "Anthranethan." 1942. In German.	1.50
14-17 PB L 74120	Directions for prod. m-dichlorobenzene-sulfochloride. 1938. In German.	1.50
18-21 PB L 74120	Directions for prod. 2,4-dichlorophenyl-thioglycolic acid. 1938. In German.	1.50
22-23A PB L 74120	Directions for prod. "Braunol." 1942. In German.	1.50
24 PB L 74120	Brief directions for "Bromatin." 1943. In German.	1.50
25-28 PB L 74120	Directions for prod. "Bromdiester." 1941. In German.	1.50
29-31 PB L 74120	Directions for prod. "Bromgelbseal." 1942. In German.	1.50
32-34 PB L 74120	Directions for prod. "Chlornaphten." 1942. In German.	1.50
35-38 PB L 74120	Directions for prod. 2-chloro-4-nitrobenzoic acid. 1938. In German.	1.50
39-41	Directions for prod. "Dermicol-	

PB L 74120 — fett 2." 1943. In German. 1.50

43-47 PB L 74120 — Directions for prod. "Diester." 1942-1944. In German. 1.50

48-49 PB L 74120 — Directions for prod. dispersing agent "SS." 1939. In German. 1.50

50-52 PB L 74120 — Directions for prod. "Gelevan." 1943. In German. 1.50

53 PB L 74120 — Brief directions for "Orquanthrimid." 1943. In German. 1.50

54-56 PB L 74120 — Directions for prod. "Hertolan." 1939. In German. 1.50

57-58 PB L 74120 — Directions for prod. hydrophobing agent 1/101. 1943. In German. 1.50

59-64 PB L 74120 — Directions for prod. "Indanthrendruckbraun 3 R" base and "5 R" base. 1942. In German. 1.50

65-72 PB L 74120 — Directions for prod. "Indanthrengoldgelb GK." 1938-1940. In German. 1.50

73-76 PB L 74120 — Directions for prod. leather oil 1/50 and "Dermaol 81 1." n. d. In German. 1.50

77-80 PB L 74120 — Directions for prod. malonitrile. 1938. In German. 1.50

81-84 PB L 74120 — Directions for prod. "Methylchinolsäure." 1942. In German. 1.50

85-88 PB L 74120 — Directions for prod. "NM-Isatin." 1938. In German. 1.50

89-93 PB L 74120 — Directions for prod. "Mitigal." 1942. In German. 1.50

94-98 PB L 74120 — Directions for prod. sodium hydroxide starch. 1938. In German. 1.50

99-101 PB L 74120 — Directions for prod. m-nitrobenzamido salicylic acid. 1942. In German. 1.50

102-104 PB L 74120 — Directions for prod. 1-nitro-4-methoxy-benzyl-chloride. 1942. In German. 1.50

105-107 PB L 74120 — Directions for prod. "Nitroxylsulfon." 1942. In German. 1.50

108-110 PB L 74120 — Preparation of o-chlorobenzoic acid. 1945. In German. 1.50

111-114 PB L 74120 — Directions for prod. hydroxythionaphthene carboxylic acid. 1938. In German. 1.50

115-118 PB L 74120 — Directions for prod. oxazine intermediate "S." 1939. In German. 1.50

119-120 PB L 74120 — Directions for prod. "Persistol VS." 1943. In German. 1.50

121-125 PB L 74120 — Directions for prod. "Pigmentechtviolett R" base. 1939. In German. 1.50

126-130 PB L 74120 — Directions for prod. "Pyrengrün." 1939. In German. 1.50

131-133 PB L 74120 — Directions for prod. "Thio-IR-säure." 1943. In German. 1.50

134-137 PB L 74120 — Directions for prod. "Transketon." 1936. In German. 1.50

138 PB L 74120 — Brief directions for prod. "Trimehl." 1943. In German. 1.50

139-142 PB L 74120 — List of dyes with their intermediates. n. d. In German. 1.50

143-152 PB L 74120 — Directions for producing "Siriuslichtblau FFRL" and intermediate. 1938-1939. In German. 1.50

153-179 PB L 74120 — Directions for prod. "Siriuslichtblau FJGL" and intermediates for it. 1938. In German. 3.00

180-187 PB L 74120 — Directions for prod. "Siriuslichtblau FF2GL" and its intermediate "Sulfanil." 1938. In German. 1.50

188-197 PB L 74120 — Directions for prod. "Indanthrenbraun GR" and "RRD." 1938. In German. 1.50

198-226 PB L 74120 — Directions for prod. "Indanthrengelb FFRK," "3 RT" and "3 R" and intermediates. 1938-1942. In German. 3.00

227-238 PB L 74120 — Directions for prod. "Indanthrengoldgelb GK" and intermediates. 1938-1940. In German. 1.50

239-247 PB L 74120 — Directions for prod. "Indanthrenkhaki GG" and intermediate. 1938. In German. 1.50

248-255 PB L 74120 — Directions for prod. "Indanthrenmarineblau R" and intermediate. 1938-1939. In German. 1.50

256-270 PB L 74120 — Directions for prod. "Indanthrenrotviolett RH" and intermediates. 1938. In German. 1.50

271-273 PB L 74120 — Directions for prod. "Indanthrenscharlach GG". 1941. In German. 1.50

274-289 PB L 74120 — Directions for prod. "Indanthrendruckblau R" base and intermediates. 1938. In German. 1.50

290-297 PB L 74120 — Directions for prod. "Indanthrengoldgelb RK" and base. 1938. In German. 1.50

298-322 PB L 74120 — Directions for prod. "Indanthrendruckblau B" and "GG" bases and intermediates. 1938. In German. 2.50

323-331 PB L 74120 — Directions for prod. "Indanthrengrau M" and intermediate. 1938-1939. In German. 1.50
See also Frames 353-357.

332-345 PB L 74120 — Directions for prod. "Indanthrendruckbraun B" and "5R" bases and intermediates. 1939-1942. In German. 1.50

346-352 PB L 74120 — Directions for prod. "Indanthrendruckgelb GGW" and intermediate. 1938-1939. In German. 1.50

353-357 PB L 74120 — Directions for prod. "Orquanthrimid MG." 1941. In German. 1.50

358-372 PB L 74120 — Directions for prod. "Indanthrendruckschwarz Suprafix" and intermediates. 1938-1939. In German. 1.50

373-392 PB L 74120 — Directions for prod. "Algolscharlach GG" and "GGRN" and intermediates. 1938-1939. In German. 2.00

393-400 PB L 74120 — Directions for prod. "Helindonbraun CRD" and "CV." 1937-1938. In German. 1.50

401-404 — Directions for prod. "Helindon-

Dyes (contd)

PB L 74120 — gelb CG." 1943. In German. 1.50

405-408 PB L 74120 — Directions for prod. "Helindonkhaki C." 1938. In German. 1.50

409-413 PB L 74120 — Incomplete item, apparently on "Algolrot 5 B." n. d. In German. 1.50
Two frames mutilated.

414-418 PB L 74120 — Directions for prod. "Anthrasol O" (?). 1938. In German. 1.50

419-422 PB L 74120 — Directions for prod. "Anthrasol." 1938. In German. 1.50

423-430 PB L 74120 — Directions for prod. "Anthrasolblau IBC" and intermediate. 1938. In German. 1.50

431-435 PB L 74120 — Directions for prod. "Anthrasolrot IFBB." 1942. In German. 1.50

436-440 PB L 74120 — Directions for prod. "Anthrasol-Brillantorange IRK." 1942. In German. 1.50

441-444 PB L 74120 — Directions for prod. "Anthrasolbraun IVB." 1942. In German. 1.50

445-470 PB L 74120 — Directions for prod. "Anthrasolgrün I3G" and intermediates. 1938-1942. In German. 3.00

471-476 PB L 74120 — Directions for prod. "Anthrasolgoldgelb IRK." 1940. In German. 1.50

477-484 PB L 74120 — Directions for prod. "Anthrasolbraun IBB" and "IRRD." 1941. In German. 1.50

485-488 PB L 74120 — Directions for prod. "Anthrasoldruckblau IGG." 1940. In German. 1.50

489-501 PB L 74120 — Directions for prod. "Anthrasoldruckschwarz IB." 1941. In German. 1.50

502-505 PB L 74120 — Directions for prod. "Anthrasolgoldgelb IGK." 1940. In German. 1.50

506-509 PB L 74120 — Directions for prod. "Anthrasolgrau IRL." 1941. In German. 1.50

510-519 PB L 74120 — Directions for prod. "Anthrasolgrün IB." 1940. In German. 1.50

520-523 PB L 74120 — Directions for prod. "Anthrasolorange HR." 1941. In German. 1.50

524-527 PB L 74120 — Directions for prod. "Anthrasolscharlach IB." 1941. In German. 1.50

528-531 PB L 74120 — Directions for prod. "Anthrasolrotviolett IRH." 1941. In German. 1.50

532-534 PB L 74120 — List of dyes with their intermediates. n. d. In German. 1.50

535-538 PB L 74120 — Directions for prod. "Cubanabraun R." 1938. In German. 1.50

539-542 PB L 74120 — Directions for prod. "Zapongelb 6431." 1941. In German. 1.50

543-546 PB L 74120 — Directions for prod. "Zaponechtrot CB." 1941. In German. 1.50

547-553 PB L 74120 — Directions for prod. "Zaponechtscharlach CR" and "CG." 1941. In German. 1.50

554-573 PB L 74120 — Directions for prod. "Brillantsulfoflavin FF" and intermediates. 1938. In German. 2.00

574-589 PB L 74120 — Directions for prod. "Supranolbrillantblau G" and intermediates. 1938-1939. In German. 2.00

590-598 PB L 74120 — Directions for prod. "Alizarindirektblau A2G" and "AR." 1938-1940. In German. 1.50

599-606 PB L 74120 — Directions for prod. "Alizarindirektviolett R2" and "R2." 1938. In German. 1.50

607-615 PB L 74120 — Directions for prod. "Anthralanblau 2R" and intermediates. 1942. In German. 1.50

616-623 PB L 74120 — Directions for prod. "Alizarinreinblau FFB." 1938-1939. In German. 1.50

624-635 PB L 74120 — Directions for prod. "Alizaringrau G" and intermediates. 1938. In German. 1.50

636-649 PB L 74120 — Directions for prod. "Alizarinschwarz S" and "WX" and intermediate for them. 1938. In German. 1.50

650-657 PB L 74120 — Directions for prod. "Alizarinbraun HD" and base. 1938. In German. 1.50

658-685 PB L 74120 — Directions for prod. "Indanthrenbrillantorange GR" and "Indanthrenbordo RR" and intermediates. 1938-1941. In German. 3.00

686-711 PB L 74120 — Directions for prod. "Indanthrendruckschwarz B" and intermediates. 1938. In German. 3.00

712-740 PB L 74120 — Directions for prod. "Indanthrendruckbraun R" and "3R" and intermediates. 1938-1942. In German. 3.00

741-752 PB L 74120 — Directions for prod. "Indanthrentürkisblau GK" and intermediates. 1938-1939. In German. 1.50

753 PB L 74120 — Directions for prod. "Siriuslichtrotviolett FRL." n. d. In German. 1.50

754-762 PB L 74120 — Directions for prod. "Helindonkhaki CR" and intermediate. 1938. In German. 1.50

763-766 PB L 74120 — Directions for prod. "Helindonrot CR." 1938. In German. 1.50

767-810 PB L 74120 — Directions for prod. "Siriuslichtblau FFB," "FFGL," and "FJH," and intermediates. 1938-1942. In German. 4.50

811-832 PB L 74120 — Lists of dyes. n. d. In German. 2.50

833-836 PB L 74120 — Directions for dissolving dye bases. 1938. In German. 1.50

837-839 PB L 74120 — Directions for prod. "Alizarin-Chromblau FFG." 1942. In German. 1.50

840-843 PB L 74120 — Directions for prod. "Alizarindirektblau AR." 1938. In German. 1.50

844-855 PB L 74120 — Directions for prod. "Anthrasol AZG," "OAG," and "OR." 1941-1942. In German. 1.50

856-859 PB L 74120 — Directions for prod. "Anthrasolblau IGC." 1941. In German. 1.50

860-863 PB L 74120 — Directions for prod. "Anthrasolblauschwarz IRD." 1941. In German. 1.50

864 PB L 74120 — Brief directions for prod. "Anthrasolbraun IRR." 1943. In German. 1.50

865-868 PB L 74120 — Directions for prod. "Anthrasol-Brillantrosa IRB." 1941. In German. 1.50

869-872 PB L 74120 — Directions for prod. "Anthrasol-Brillantviolett IWR." 1941. In German. 1.50

873-876 PB L 74120 — Directions for prod. "Anthrasoldruckblau IB." 1941. In German. 1.50

877-884 PB L 74120 — Directions for prod. "Anthrasoldruckviolett IBBF" and "IRR." 1941. In German. 1.50

885-892 PB L 74120 — Directions for prod. "Anthrasolgelb HCG" and "V." 1941. In German. 1.50

893-900 PB L 74120 — Directions for prod. "Anthrasolgrün AB" and "IGG." 1941. In German. 1.50

901-904 PB L 74120 — Directions for prod. "Anthrasolrosa IR extra." 1941. In German. 1.50

905-907 PB L 74120 — Directions for prod. "Chromechtgelb 8GL." 1942. In German. 1.50

908-911 PB L 74120 — Directions for prod. "Chromoxanreinblau BL." 1942. In German. 1.50

912 PB L 74120 — Brief directions for "Helindonbraun CV." 1943. In German. 1.50

913 PB L 74120 — Directions for prod. "Helindonbrillantgelb GF." 1942. In German. 1.50

914-918 PB L 74120 — Directions for prod. "Helindongelb CG" and "CGFS." 1938-1943. In German. 1.50

919 PB L 74120 — Directions for prod. "Helindongrün B." 1942. In German. 1.50

920-927 PB L 74120 — Directions for prod. "Helindonschwarz IR" and "T." 1938. In German. 1.50

928-930 PB L 74120 — Directions for prod. "Indanthrenbraun RRD Suprafix." 1942. In German. 1.50

931-934 PB L 74120 — Directions for prod. "Indanthrendruckbraun B." 1939. In German. 1.50

935 PB L 74120 — Brief directions for "Indanthrengrün M" and "MO." 1943. In German. 1.50

936-939 PB L 74120 — Directions for prod. "Indanthrenbrillantorange GR." 1937. In German. 1.50

940-943 PB L 74120 — Directions for prod. "Indanthrenscharlach GG." 1939. In German. 1.50

944-957 PB L 74120 — Directions for prod. "Indanthrendruckschwarz BL" and "BGL" and their "Suprafix." 1938-1943. In German. 1.50

958-960 PB L 74120 — Directions for prod. "Indanthrenrotviolett RH." 1942. In German. 1.50

961 PB L 74120 — This frame has been cancelled.

962-964 PB L 74120 — Directions for prod. "Siriuslichtblau FF2GL." 1942. In German. 1.50

965-968 PB L 74120 — Directions for prod. "Zaponechtblau CGG." 1941. In German. 1.50

PB L 74123. I. G. FARBENINDUSTRIE A. G. Instruction for the production of dyes. (FIAT Microfilm Reel CC 18, Frames 5592-6281) 1927-1946. 254 f. Price: Microfilm-$3.50 - Enlargement print-$25.50

This FIAT microfilm reel contains directions for the production of numerous dyes. Directions for individual dyes, listed below, are available as enlargement prints. Please include the above PB and frame numbers when ordering an individual item. In German.

Frames	Title	Price
5592-5597 PB L 74123	"Autolrot RLP." 1937-1942. In German.	$1.50
5598-5611 PB L 74123	These frames are missing.	
5612-5617 PB L 74123	"Hansarot B." 1936-1945. In German.	1.50
5618-5635 PB L 74123	These frames are missing.	
5636-5637 PB L 74123	"Litholechtscharlach RN." 1936. In German.	1.50
5638-5645 PB L 74123	These frames are cancelled.	
5646-5651 PB L 74123	"Litholechtorange 3 GL." 1935. In German.	1.50
5652-5654 PB L 74123	These frames are cancelled.	
5655-5679 PB L 74123	"Litholechtorange RN." n. d. In German. Frames 5661-5677 are missing.	1.50
5680-5685 PB L 74123	These frames have been cancelled.	
5686-5703 PB L 74123	"Pigmentrot B" and "Paratonar B." 1934-1941. In German. Several pages are cancelled, others poorly legible.	1.50
5704-5717 PB L 74123	These frames are missing.	
5718-5739 PB L 74123	"Permanentrot R." 1936-1946. In German. Frames 5723-5734 are missing.	1.50
5740-5770 PB L 74123	These frames are missing.	
5771-5772 PB L 74123	"Permanentrot GG." 1942. In German.	1.50
5773-5801 PB L 74123	These frames are missing.	
5802-5815A PB L 74123	"Permanentorange G." 1937-1946. In German. Frames 5809-5810 are cancelled.	1.50
5816-5832 PB L 74123	These frames are missing.	
5833-5844 PB L 74123	"Litholechtscharlach RN." 1940-1945. In German.	1.50
5845-5869 PB L 74123	These frames are missing.	

Dyes (contd)

5872-5874
5876-5877
FB L 74123 "Litholechtrotton er B." 1934-1946. In German. 1.50

5875
FB L 74123 "Portrot RAL." 1937. In German. 1.50

5878-5880
FB L 74123 "Litholechtrotton er B." 1940-1946. In German. 1.50

5881
FB L 74123 Lacquers. n. d. In German. 1.50

5882-5887
FB L 74123 These frames are cancelled.

5888-5894
FB L 74123 "Permanenticarmin FB." 1938-1943. In German. 1.50

5895-5901
FB L 74123 These frames are cancelled.

5902-5907
FB L 74123 "Permanentbordo RRT." 1937-1946. In German. 1.50

5908-5910
FB L 74123 "Permanentbraun FG." 1940-1946. In German. 1.50

5911-5919
FB L 74123 These frames are cancelled.

5920
5923-5927
FB L 74123 "Permanentgelb HCG." 1937-1946. In German. 1.50

5921-5922
FB L 74123 These frames are cancelled.

5928-5932
FB L 74123 "Permanentorange GTR." 1937-1946. In German. 1.50

5933-5936
FB L 74123 These frames are cancelled.

5937-5940
FB L 74123 "Permanentrot FGR." 1941-1946. In German. 1.50

5941
FB L 74123 These frames are cancelled.

5942-5943
FB L 74123 "Permanentrot L 2025." 1939. In German. 1.50

5944-5949
FB L 74123 "Permanentrot FRL." 1938-1945. In German. 1.50

5950-5965
FB L 74123 These frames are missing.

5966-5971
FB L 74123 "Permanentrot FRLL." 1938-1946. In German. 1.50

5972
FB L 74123 These frames are cancelled.

5973-5977
FB L 74123 "Permanentrot FRR." 1941-1946. In German. 1.50

5978-5990
FB L 74123 These frames are missing.

5991-5998
FB L 74123 "Permanentrot F4R." 1936-1945. In German. 1.50

5999-6015
FB L 74123 These frames are missing.

6016-6018
FB L 74123 "Permanentrot 4 RT." 1939-1946. In German. 1.50

6019-6021
FB L 74123 These frames are cancelled.

6022-6024A
FB L 74123 "Permanentrubin FBH." 1937-1946. In German. 1.50

6025-6026
FB L 74123 These frames are cancelled.

6027-6028
FB L 74123 "Pigmentcarmin 2 B." 1927-1946. In German. 1.50

6029
FB L 74123 These frames are cancelled.

6030-6033
FB L 74123 "Vulcanechtbordo BF." 1937-1946. In German. 1.50

6034-6035
FB L 74123 "Vulcanechtrot 5 BF." 1934-1936. In German. 1.50

6036-6041
FB L 74123 "Vulcanechtgelb G" and "5 G." 1938-1945. In German. 1.50
Frames 6039 and 6040 are cancelled.

6042-6048
FB L 74123 These frames are cancelled.

6049-6054
FB L 74123 "Vulcanechtgelb GR." 1943-1945. In German. 1.50

6055-6077
FB L 74123 These frames are cancelled.

6078-6081
FB L 74123 "Vulcanechtgelb R." 1933-1945. In German. 1.50

6082-6084
FB L 74123 These frames are cancelled.

6085-6087
FB L 74123 "Vulcanechtorange GG." 1937-1945. In German. 1.50

6088-6092
FB L 74123 These frames are cancelled.

6093-6098
FB L 74123 "Vulcanechtrosa GF." 1936-1945. In German. 1.50

6099
FB L 74123 These frames are cancelled.

6100-6103
FB L 74123 "Vulcanechtrot BK" and "BF." 1941-1945. In German. 1.50

6104-6114
FB L 74123 These frames are missing.

6115-6119
6122-6125
FB L 74123 "Vulcanechtrot G," "GF," and "GK," 1937-1945. In German. 1.50

6120-6121
FB L 74123 These frames are cancelled.

6126-6137
FB L 74123 These frames are missing.

6138-6139
6142-6145
FB L 74123 "Vulcanechtrubin B" and "BF." 1938-1945. In German. 1.50

6140-6141
FB L 74123 These frames are cancelled.

6146-6155
FB L 74123 "Helicbordo BL." 1934-1945. In German. 1.50

6156-6186
FB L 74123 These frames are missing.

6187-6188
FB L 74123 "Helicbordo BLC." 1934-1945. In German. 1.50

6189-6194
6209-6214
FB L 74123 "Helicorange CAB." 1936-1945. In German. 1.50

6195-6208
FB L 74123 These frames are missing.

6215-6236
FB L 74123 These frames are missing.

Dyes (contd)

6237-6242 PB L 74123 "Heliocrangé TD." 1934-1945. In German. 1.50

6243-6253 PB L 74123 These frames are missing.

6254-6272 6275-6280 PB L 74123 "Heliorot BL." 1935-1946. In German. 2.50

6273-6274 6281 PB L 74123 These frames are cancelled.

PB L 70332 I. G. FARBENINDUSTRIE A. G., LUDWIGSHAFEN, GERMANY. Dyes and dye intermediates. Polymerization products. (FIAT Microfilm Reel C-1, Frames 1-1880. See also FIAT Microfilm Reel C-2, PB 70333) 1935-1937. 1880 f. Price: Microfilm-$6.00 - Enlargement print-$188.00.

This microfilm reel contains 202 reports of the I. G. Ludwigshafen main laboratory covering the period March 26, 1935 - November 9, 1937. These reports deal mainly with dyes and dye intermediates. Other reports deal with the production of plastics such as vinyl chloride and acrylic polymers and copolymers, with rayon, and with textile auxiliaries. A long report on titanium dioxide as a white pigment is included. The individual reports are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
1-3 PB L 70332	Chrome complex dyes from hydroxyquinolines. By Krzikalla and Limbacher. Mar 26, 1935. In German.	$ 1.50
4-7 PB L 70332	Oil-soluble dyes with fatty radicals. By Krzikalla and Eistert. Mar 26, 1935. In German.	1.50
8-11 PB L 70332	2,3-Hydroxynaphthoyl-methyl-taurine as coupling component for azo dyes with external sulfonic group. By Krzikalla and Eistert. Mar 26, 1935. In German.	1.50
12-14 PB L 70332	Azo dyes from hydroxytriphenylene carboxylic acid arylides. By Schuster and Schmabel. Mar 27, 1935. In German.	1.50
15-20 PB L 70332	Dyes of the pyrone series. By Krzikalla and Garbsch. Apr 9, 1935. In German.	1.50
21-30 PB L 70332	Wool dyes of the acridone series. By Krzikalla and Padon. Apr 11, 1935. In German.	1.50
31-36 PB L 70332	Analysis of "Irganitron" dyes, Geigy. By Krzikalla and Kirsch. Apr 11, 1935. In German.	1.50
37-52 PB L 70332	Analysis of: (1) Rouge acetoquinone N2J Kuhlmann ("Acetoquinone" Red N2J Kuhlmann); (2) Camacyl Fast Red Y extra, Campbell; (3) Dispersol Fast Red 18 109 Paste, I.C.I.; (4) Escarlate Acetoquinone NR Poudre Kuhlmann ("Acetoquinone" Scarlet Nr powder Kuhlmann); (5) Cibacet Scarlet BR Ciba. By Kirsch. Jun 7, 1935. In German.	2.00
53-57 PB L 70332	"Intramine Y." By Roser. Jun 7, 1935. In German.	1.50
58-70 PB L 70332	Analysis of "Zapon" lake dyes of Ciba. By Kirsch. Jun 12, 1935. In German.	1.50
71-73 PB L 70332	"Efinol B." By Roser. Jun 25, 1935. In German.	1.50
74-76 PB L 70332	Retesting of foreign patents. By Eistert and Kirsch. Jul 29, 1935. In German. Very illegible.	1.50
77-80 PB L 70332	Copolymers as rubber substitutes. Concerning the report of 15.10.34 Journ. No. 6272. By Benischek. In German.	1.50
81-153 PB L 70332	Dodecylpolyethylenglycolether as example for comparative tests of non-ionic textile auxiliaries. By Günther and Valko. Sep 30, 1935. In German.	7.50
154-160 PB L 70332	"MP-Material" its use and processing technique. By Fikentscher. Oct 11, 1935. In German.	1.50
161-186 PB L 70332	Experimental production of magnetic tape. By Matthias and Friedmann. Oct 14, 1935. In German.	3.00
187-207 PB L 70332	Quinoline and quinaldine syntheses with acroleins. By Kochendörfer. Oct 14, 1935. In German.	2.00
208-210 PB L 70332	Indigosols from 4-aminoanthraquinone-2,1(N)-1'-2'-(N)-benzacridone dyes. By Köberle and Münster. Oct 15, 1935. In German.	1.50
211-215 PB L 70332	Re-amidation of carboxylic acids. (Patent application I 52294 IVc/12 o). By Köberle. Oct 16, 1935.	1.50
216-220 PB L 70332	Stable leuco-compounds on the type of "leukamin" and leucoquinizarin. By Steigerwald. Oct 16, 1935. In German.	1.50
221-232 PB L 70332	Production of secondary, mixed substituted 1,4-diaminoanthraquinones. By Köberle and Steigerwald. Oct 16, 1935. In German.	1.50
233-238 PB L 70332	Constitution of aminoanthraphrimidine sulfonic acid from 1,5-diaminoanthraquinone-2-sulfonic acid + formamide. By Köberle and Schlichting. Oct 17, 1935. In German.	1.50
239-246 PB L 70332	Indigosols from anthraquinoneazole dyes. By Köberle and Münster. Oct 17, 1935. In German.	1.50
247-252 PB L 70332	Indigosols from phrazoleanthrone dyes. By Köberle and others. Oct 17, 1935. In German.	1.50
253-261 PB L 70332	5-Amino-1,9-anthrapyrimidine-2-sulfonic acid as starting substance for new dyes. By Schlichting. Oct 18, 1935. In German.	1.50
262-270 PB L 70332	Two new catalysts for the technical hydrogenation of palm nut fat. By Rothhaas. Oct 18, 1935. In German.	1.50
271-277 PB L 70332	Examination of "Rouge No.292" (Tscherniack-Paris). By Kirsch. Oct 22, 1935. In German.	1.50
278-292 PB L 70332	Oxidation of benzene to phenol with and without pressure. By Otto Schmidt. Nov 6, 1935. In German.	1.50
293-298 PB L 70332	Dyes from 2,6-diamino-1-chlorobenzene-4-sulfonic acid. By Krzikalla and Eistert. Nov 12, 1935. In German.	1.50

299-303 PB L 70332 — Zapon dyes of competitive firms. By Krzikalla and Kirsch. Nov 12, 1935. In German. 1.50

304-309 PB L 70332 — Azo dyes for two-tone colors. By Krzikalla and Garbasch. Nov 13, 1935. In German. 1.50

310-315 PB L 70332 — Azo dyes of homophtalimide. By Krzikalla and Limbacher. Nov 18, 1935. In German. 1.50

316-320 PB L 70332 — Abietinol resins and plasticizers. By Krzikalla. Nov 25, 1935. In German. 1.50

321-326 PB L 70332 — Water-soluble dyes with basic character. By Krzikalla and Pammwitz. Nov. 28, 1935. In German. 1.50

327-340 PB L 70332 — Copolymers of vinyl chloride and other compounds capable of polymerisation. By Fikentscher and Franke. Dec 3, 1935. In German. 1.50

341-351 PB L 70332 — Dihydro-resorcinol as coupling component for azo dyes. By Krzikalla. Dec 4, 1935. In German. 1.50
Frames 346-351 duplicate frames 341-345.

352-367 PB L 70332 — Simple ultracentrifuge for measurement of particle sizes. By Hengstenberg. Dec 5, 1935. In German. 2.00

368-373 PB L 70332 — Copolymers as substitutes for rubber. By Benischek. Dec 5, 1935. In German. 1.50

374-378 PB L 70332 — Polyvinyl chloride "Lu 64". By Franke I. Dec 6, 1935. In German. 1.50

379-382 PB L 70332 — Pigment dyes based on phthalodinitrile. By Hopff and Steinbrunn. Jan 8, 1936. In German. 1.50

383-386 PB L 70332 — Soluble copolymerization material as insulating varnish. By Benischek and Fikentscher. Jan 24, 1936. In German. 1.50

387-392 PB L 70332 — Vinyl chloride - vinyl ester copolymers. By Fikentscher and Franke I. Jan 29, 1936. In German. 1.50
Partially illegible.

393-396 PB L 70332 — Centrifugal device for the distillation of bumping liquids. By Küspert. Feb 3, 1936. In German. 1.50

397-416 PB L 70332 — Vat green P 401 and experiments with B-azabenzanthrone. By Köberle and Rohland. Feb 21, 1936. In German. 2.00

417-427 PB L 70332 — B - Azabenzanthrones. By Köberle and Ender. Feb 24, 1936. In German. 1.50

428-434 PB L 70332 — Urea resin-polyvinyl alcohol mixtures for brake linings and clutch plates. By Scheuermann and Wolf. Feb 25, 1936. In German. 1.50

435-443 PB L 70332 — 1-Amino- or 1-alkylamino-4-hydroxy-anthraquinones. By Steigerwald. Feb 25, 1936. In German. 1.50

444-447 PB L 70332 — Naphthalene tetracarboxylic acid by the urea chloride process. By Hopff and Freytag. Mar 3, 1936. In German. 1.50

448-451 PB L 70332 — Polycyclic mono- and dicarboxylic acids by the urea chloride process. By Hopff and Freytag. Mar 3, 1936. In German. 1.50

452-467 PB L 70332 — Derivatives of the "Bz.3-azabenzanthron." By Ebel and Rohland. Mar 3, 1936. In German. 2.00

468-478 PB L 70332 — Processing of Igelits according to the process for manufacturing tablets. By Fikentscher. Mar 3, 1936. In German. 1.50

479-493 PB L 70332 — New dyes or fluorescent dyes. By Köberle and Schlichting. Mar 4, 1936. In German. 1.50

494-506 PB L 70332 — New auxiliary agents in the dyeing industry. By Ebel. Mar 5, 1936. In German. 1.50

507-514 PB L 70332 — 1,12 - Benzoperylene. By Köberle. Mar 9, 1936. In German. 1.50

515-519 PB L 70332 — Determination of triethylene glycol in diethylene glycol. By Kerekow. Mar 13, 1936. In German. 1.50

520-528 PB L 70332 — Determination of small amounts of nitrogen in organic substances. By Wurzschmidt and Zimmermann. Mar 23, 1936. In German. 1.50

529-549 PB L 70332 — Reaction of carbon monoxide and carboxylic chlorides with n- and isobutane. A contribution to the mechanism of the Friedel-Crafts' synthesis. By Hopff. Mar 23, 1936. In German. 2.50

550-556 PB L 70332 — Hydrogenation of rosin to K-alcohol (Hydroabietinol). By Küspert. Mar 23, 1936. In German. 1.50

557-563 PB L 70332 — Penetrating nitrodiphenylamine dyes for leather. By Krzikalla and Pardon. Apr 6, 1936. In German. 1.50

564-569 PB L 70332 — Triarylmethane dyes capable of being chrome-developed, from aldehydosalicylic acid. By Krzikalla and Thode. Apr 7, 1936. In German. 1.50

570-576 PB L 70332 — Diphenylamines and acridones, capable of being chrome-developed. By Krzikalla and Pardon. Apr 9, 1936. In German. 1.50

577-583 PB L 70332 — Catalytic dehydrogenation of saturated nitriles. By Schmidt and Schäfer. Apr 16, 1936. In German. 1.50

584-593 PB L 70332 — Stabilizers for vinyl chloride polymers. By Franke I. Apr 22, 1936. In German. 1.50

594-599 PB L 70332 — Acrylic ester of higher alcohols and improved preparation of acrylic acid. By Franke I. Apr 24, 1936. In German. 1.50

600-603 PB L 70332 — Present status of the method for polymerization in aqueous emulsions. By Fikentscher and Franke. Apr 29, 1936. In German. 1.50

604-625 PB L 70332 — Dispersion of sodium and preparation of alkali metal paste for

polymerization of butadiene. By Debus. May 7, 1936. In German. 2.50

626-641 PB L 70332 — Qualitative and quantitative testing of phosgene in gas mixtures. By Wurzschmidt and Zimmermann. May 17, 1936. In German. 2.00

642-655 PB L 70332 — Direct oxygen determination in zinc oxide and zinc dust. By Schütze. Jun 10, 1936. In German. 1.50

656-674 PB L 70332 — The present status in the abrasives field. By Wolf. Jun 16 and Nov 11, 1936. In German. 2.00

675-678 PB L 70332 — Sulfonation of montanic acid. By Debus. Jun 24, 1936. In German. 1.50

679-695 PB L 70332 — Polyvinyl-isobutyl ether. Use as cable impregnating substance. By Benischek. Jul 1, 1936. In German. 2.00

696-720 PB L 70332 — Size coatings of Heliogen Blue B, Powder. By Von Susich and Pohl. Aug 12, 1936. In German. 2.50

721-729 PB L 70332 — Plasticizers for Igelits. By Fikentscher and Hagen. Aug 27, 1936. In German. 1.50

730-735 PB L 70332 — Permeability of plastics to water. By Wurzschmidt and Kerckow. Sep 8, 1936. In German. 1.50

736-744 PB L 70332 — Research on the naphthindenone series. By Köberle and Rohland. Sep 15, 1936. In German. 1.50

745-748 PB L 70332 — 5-Azabenzanthrone. By Köberle and Rohland. Sep 17, 1936. In German. 1.50

749-755 PB L 70332 — Dyes of the 1,9-anthraphridone series. By Steigerwald. Sep 21, 1936. In German. 1.50

756-767 PB L 70332 — Phenyl-azolo-anthraquinone dyes. By Schlichting. Sep 22, 1936. In German. 1.50

768-783 PB L 70332 — Aza compounds as dye intermediates. By Köberle and others. Sep 23, 1936. In German. 2.00

784-801 PB L 70332 — Examination of: (1) Fat-soluble color "Fettgelb R", Siegle; (2) Lithosol Fast Orange G Powder, Dupont; (3) Solfast Pink 3Y, Sherwin Williams Co.; (4) Solfast Pink 3B, Sherwin Williams Co. By Kirsch. Sep 25, 1936. In German. 2.00

802-815-A PB L 70332 — Tests for objective testing of laundering agents. By Hengstenberg and Wappes. Sep 25, 1936 and Feb 17, 1937. In German. 1.50

815-B-822 PB L 70332 — Determination of an ester-alcohol mixture by a rapid test. By Kerckow. Sep 25, 1936. In German. 1.50

823-832 PB L 70332 — Mechanism of leveling agents. By Valko. Oct 8, 1936. In German. 1.50

833-836 PB L 70332 — Determination of triethylene glycol in diethylene glycol. By Kerckow. Oct 9, 1936. In German. 1.50

837-840 PB L 70332 — Synthesis of Igepons containing urea groups. By Gräfinger. Oct 12, 1936. In German. 1.50

841-847 PB L 70332 — Hydroxyethylation products of higher molecular alkylphenols from German mineral oil. By Götz and Gräfinger. Oct 12, 1936. In German. 1.50

848-855 PB L 70332 — Textile auxiliary agents from chloroalkylpolyglycol ethers. By Götz. Oct 12, 1936. In German. 1.50

856-860 PB L 70332 — Introduction of alcoholic hydroxyl groups into alkylated aromatic hydrocarbons. By Merkel. Oct 13, 1936. In German. 1.50

861-866 PB L 70332 — Alcohols from arylketones and textile auxiliary agents therefrom. By Schuster and others. Oct 13, 1936. In German. 1.50

867-874 PB L 70332 — Condensation of halogenation products of German mineral oils with phenols. By Bäumler. Oct 13, 1936. In German. 1.50

875-879 PB L 70332 — Non-slip agent for rayon. By Krzikalla and Garbsch. Oct 13, 1936. In German. 1.50

880-884 PB L 70332 — Emulsifiers for emulsion polymerization based on German mineral oils. By Bäumler. Oct 13, 1936. In German. 1.50

885-889 PB L 70332 — Polymeric agents active in lowering surface tension. By Merkel and Götz. Oct 13, 1936. In German. 1.50

890-896 PB L 70332 — Plasticizers and stabilizers for Igelits. By Fikentscher and Franke. Oct 26, 1936. In German. 1.50

897-900 PB L 70332 — Erganil dyes from benzidine-o-dicarboxylic acid. By Krzikalla and Limbacher. Nov 2, 1936. In German. 1.50

901-915 PB L 70332 — Device for testing elastic materials at low temperatures. By Benischek. Nov 3, 1936. In German. 1.50

916-918 PB L 70332 — Superficial leather dyestuffs from 4-nitro-1,3-phenylenediamine. By Krzikalla and Limbacher. Nov 3, 1936. In German. 1.50

919-922 PB L 70332 — Erganil dyes based on resorcinol. By Krzikalla and Limbacher. Nov 3, 1936. In German. 1.50

923-925 PB L 70332 — Ferriferous "Nigger brown" azo dyes for leather. By Krzikalla and Limbacher. Nov 3, 1936. In German. 1.50

926-929 PB L 70332 — Azo dyes from p-substituted alkylphenols. By Krzikalla. Nov 3, 1936. In German. 1.50

930-933 PB L 70332 — Penetrating leather dyes. By Krzikalla and Pardon. Nov 4, 1936. In German. 1.50

934-940 PB L 70332 — Developing fast colors upon "Wollstra" with neutral water soluble substantive naphthols. By Alt. Nov 6, 1936. In German. 1.50

941-944 PB L 70332 — "Wollstra"-naphthols with sulfamide groups. By Krzikalla and Eistert. Nov 6, 1936. In German. 1.50

945-947 PB L 70332 — Dyeing with palatin fast dyes in a weak acid medium. By Krzikalla

and Winkler. Nov 6, 1936. In German. 1.50

948-960 PB L 70332 — Azo dyes of aminophthalic acid. By Krzikalla. Nov 9, 1936. In German. 1.50

961-964 PB L 70332 — Water-soluble acetate rayon dyes. By Krzikalla and Garbsch. Nov 9, 1936. In German. 1.50

965-968 PB L 70332 — Sugar compounds as components for acetate rayon dyes. By Schuster and Krzikalla. Nov 9, 1936. In German. 1.50

969-981 PB L 70332 — Azo dyes from cyclohexylmethyl-pyrazolones. By Krzikalla and Klaproth. Nov 10, 1936. In German. 1.50

982-996 PB L 70332 — Development of vinyl chloride emulsion polymers at Ludwigshafen from Autumn 1935 to Autumn 1936. By Fikentscher and Franke. Nov 12, 1936. In German. 3.50

997-1026 PB L 70332 — Direct determination of oxygen in organic compounds. By Schütze. Nov 13, 1936. In German. 3.00

1027-1042 PB L 70332 — Determination of the structure of 4 Solacet dyes of the I.C.I. By Kirsch. Nov 20, 1936. In German. 2.00

1043-1047 PB L 70332 — Determination of the permeability of plastic materials for acids. By Kerckow. Nov 21, 1936. In German. 1.50

1048-1053 PB L 70332 — Process for rendering compounds containing nitrogen soluble in water. By Alt. Nov 23, 1936. In German. 1.50

1054-1059 PB L 70332 — Experiments for processing (or working up) and application of polymerization products. By Fikentscher. Dec 1, 1936. In German. 1.50

1060-1077 PB L 70332 — Determination of the constitution of 7 dyes of foreign firms. By Kirsch. Dec 1, 1936. In German. 2.00

1078-1090 PB L 70332 — Products of acrylic and methacrylic acid, their development and application. By Fikentscher. Dec 4 1936. In German. 1.50

1091-1095 PB L 70332 — Improvement of Ramasit K concentrated. By Kengstenberg and Wappes. Dec 16, 1936. In German. 1.50

1096-1102 PB L 70332 — Examination of fluorescent compounds of other firms. By Eichel and Hopff. Dec 31, 1936. In German. 1.50

1103-1108 PB L 70332 — Catalytic reduction of polycyclic aromatic compounds. By Eichel and Hopff. Dec 31, 1936. In German. 1.50

1109-1116 PB L 70332 — New acetate rayon dyes (Gamma-oxo-butylamino-anthraquinone). By Eichel and Hopff. Dec 31, 1936. In German. 1.50

1117-1122 PB L 70332 — The technical production of cyclopentanone from adipic acid. By Hopff and Böttcher. Jan 6, 1937. In German. 1.50

1123-1136 PB L 70332 — New studies on fluorescent compounds. By Hopff and Eichel. Jan 7, 1937. In German. 1.50

1137-1143 PB L 70332 — Corrosion of aluminum by formaldehyde solutions. By Wurszchmidt. Jan 19, 1937. In German. 1.50

1144-1148 PB L 70332 — Determination of maleic acid in mixtures with mono - basic acids. By Kerckow. Jan 20, 1937. In German. 1.50

1149-1162 PB L 70332 — Diffusion tests on dyes. Particle size and dyeing behavior of the Palatine fast dyes. By Valko. Jan 21, 1937. In German. 1.50

1163-1169 PB L 70332 — The Luvimals, a new type of celluloid-like vinyl chloride co-polymers. By Hopff and Steinbrunn. Feb 11, 1937. In German. 1.50

1170-1179 PB L 70332 — New process for the production of pyrimidino compounds. By Köberle and Braun. Oct 12, 1936 and Feb 15, 1937. In German. 1.50

1180-1199 PB L 70332 — The reaction of halocompounds with cuprous cyanide. By Köberle and Braun. Feb 18, 1937. In German. 2.00

1200-1212 PB L 70332 — Perylenecarboxylic ester (fluorescent material). By Schlichting. Feb 22, 1937. In German. 1.50

1213-1239 PB L 70332 — Dyeing of mixed fibers with substantive diazo compounds. By Ebel. Feb 22, 1937. In German. 3.00

1240-1250 PB L 70332 — Halogenation of benzoic acids. By Köberle. Feb 23, 1937. In German. 1.50

1251-1256 PB L 70332 — Studies in the Indigosol field. By Bertl. Feb 23, 1937. In German. 1.50

1257-1266 PB L 70332 — Pressure chlorination of phthalocyanins. By Wiest. Feb 25, 1937. In German. 1.50

1267-1273 PB L 70332 — Phenyl-azolo-anthraquinone-dyes. By Schlichting. Feb 25, 1937. In German. 1.50

1274-1277 PB L 70332 — Production of 8-aminoquinaldine. By Arnim. Feb 26, 1937. In German. 1.50

1278-1284 PB L 70332 — Alumina brine, used as thickening agent. By Ziese and others. Feb 26, 1937. In German. 1.50

1285-1291 PB L 70332 — Pressureless chlorination of Heliogen blue B and G. By Diebold and Hopff. Mar 10, 1937. In German. 1.50

1292-1296 PB L 70332 — Analysis of crude 1,3-butylene glycol. By Kerckow. Mar 18, 1937. In German. 1.50

1297-1302 PB L 70332 — "Sapamin base", moist. By Kerckow. Mar 20, 1937. In German. 1.50

1303-1304 PB L 70332 — New copolymers of fumaric esters. By Hopff and Steinbrunn. Mar 31, 1937. In German. 1.50

1305-1315 PB L 70332 — Polymerization of methacrylamide. By Fikentscher and Hagen. Mar 31, 1937. In German. 1.50

1316-1318 PB L 70332 — Vinyl chloride-maleic ester copolymerization. (Luvimal). By Hopff and Steinbrunn. Apr 1, 1937. In German. 1.50

1319-1323 PB L 70332 — Emulsion polymerization of methyl methacrylate. By Fikentscher and Wolff. Apr 1, 1937. In German. 1.50

Dyes (contd)

1324-1342 PB L 70332 — Production of toluene from benzene and methyl chloride. By Hopff and Weickmann. Apr 8, 1937. In German. 2.00

1343-1347 PB L 70332 — Effect of carbon monoxide and acetyl chloride on propane in the presence of water-free aluminum chloride. By Hopff. Apr 9, 1937. In German. 1.50

1348-1358 PB L 70332 — Aldol analysis. By Kerckow. Apr 12, 1937. In German. 1.50

1359-1363 PB L 70332 — Hexahydrobenzidine. By Schuster and Reuber. Apr 12, 1937. In German. 1.50

1364-1368 PB L 70332 — Some new glycide compounds. By Schuster and Aurnhammer. Apr 12, 1937. In German. 1.50

1369-1375 PB L 70332 — Method and apparatus for high pressure chlorination. By Schmidt and others. Apr 14, 1937. In German. 1.50

1376-1383 PB L 70332 — Condensation products of crotonaldehyde. By Schmidt and Thewalt. Apr 14, 1937. In German. 1.50

1384-1392 PB L 70332 — Determination of glycerol by the "Micro-Zeisel-method". By Zimmermann. Apr 15, 1937. In German. 1.50

1393-1397 PB L 70332 — Technical production of cyclopentanone from adipic acid. n.d. In German. 1.50
Duplicate of Frames 1117-1122.

1398-1405 PB L 70332 — Halophthalocyanins by the sulfuryl chloride method. By Hopff and Diebold. Apr 16, 1937. In German. 1.50

1406-1410 PB L 70332 — Pressure extract of coal. By Schuster and Janson. Apr 16, 1937. In German. 1.50

1411-1414 PB L 70332 — Toplast (plasticizer). By Kerckow. Apr 28, 1937. In German. 1.50

1415-1419 PB L 70332 — Acridones and diphenylamines, capable of being chrome-developed. By Krzikalla and Martin. May 12, 1937. In German. 1.50

1420-1426 PB L 70332 — Production of blue triphenylmethane dyes, capable of being chrome-developed. By Krzikalla and Alt. May 12, 1937. In German. 1.50

1427-1432 PB L 70332 — Naphthol AS derivatives with hydroxyalkyl groups in the arylide radical. By Krzikalla and Alt. May 13, 1937. In German. 1.50

1433-1435 PB L 70332 — Triphenylmethane dyes of 1-hydroxybenzene-2,6-dicarboxylic acid, capable of being chrome-developed. By Krzikalla and Alt. May 13, 1937. In German. 1.50

1436-1443 PB L 70332 — Nitrooxazines and thiazines as penetrating agents for leather. By Krzikalla and Pardon. May 13, 1937. In German. 1.50

1444-1449 PB L 70332 — Fast developing colors on "Wollstra" with neutral water-soluble substantive naphthols. By Krzikalla and Alt. May 14, 1937. In German. 1.50

1450-1459 PB L 70332 — Azomethines containing chrome. New Palatine fast dyestuffs. By Krzikalla and Pfitzner. May 15, 1937. In German. 1.50

1460-1464 PB L 70332 — Triarylmethane dyes capable of being chrome-developed, based on aldehydosalicylic acids. By Krzikalla and Thode. May 18, 1937. In German. 1.50

1465-1475 PB L 70332 — The importance of five-membered and six-membered-secondary valence ring formation for the stability of complex compounds of metalizable dyestuffs. By Krzikalla and Pfitzner. May 20, 1937. In German. 1.50

1476-1478 PB L 70332 — Water-soluble acetate rayon dyes. By Krzikalla and Garbsch. May 24, 1937. In German. 1.50

1479-1484 PB L 70332 — Erganil dyes. By Krzikalla and others. May 24, 1937. In German. 1.50

1485-1487 PB L 70332 — Azo dyestuffs of 1-hydroxy- 3-oxo-juloline. By Krzikalla. May 24, 1937. In German. 1.50

1488-1490 PB L 70332 — A new Igemal dark green of the C-series. By Krzikalla and Pfitzner. May 24, 1937. In German. 1.50

1491-1506 PB L 70332 — Metal complexes of azo dyes. By Eistert. May 25, 1937. In German. 2.00

1507-1514 PB L 70332 — Determination of sugar and dextrin in methylviolet brands. By Kerckow. May 27, 1937. In German. 1.50

1515-1521 PB L 70332 — Acid wool dyes with external basic groups. By Krzikalla and others. May 28, 1937. In German. 1.50

1522-1528 PB L 70332 — Research on butadiene. By Wurzschmidt and Kerckow. Jun 2, 1937. In German. 1.50

1529-1540 PB L 70332 — The molecular mechanism of pigment washing. By Valko. Jun 10, 1937. In German. 1.50

1541-1547 PB L 70332 — Method for the direct determination of oxygen in organic compounds. (Micro analytic). By Zimmermann. Jun 15, 1937. In German. 1.50

1548-1554 PB L 70332 — Preparation of alkylated benzoic acids. By Haussmann and Nold. Jun 15, 1937. In German. 1.50

1555-1564 PB L 70332 — Chrome complex dyes. By Krzikalla. Jun 21, 1937. In German. 1.50

1565-1590 PB L 70332 — Effect of the quality of zinc dust on the production of hyposulfite. By Wurzschmitt and Schütze. Jun 28, 1937. In German. 3.00

1591-1597 PB L 70332 — Constitution of the water-soluble calcium compounds of Trilon A and Ma 416. By Pfitzner and Valko. Jul 8, 1937. In German. 1.50

1598-1699 PB L 70332 — Titanium dioxide as white pigment. By Wurzschmitt. Jun 1937. In German. 10.50
Frame 1632 is missing.

1700-1704 PB L 70332 — Determination of sulfanilic acid in metanilic acid. By Kerckow. Jul 14, 1937. In German. 1.50

Dyes (contd)

1706-1717 PB L 70332 — Re-examination of preparations containing a new element. By Wurzschmitt and Schuhknecht. Jul 17, 1937. In German. 1.50

1718-1727 PB L 70332 — Polymerization of acrylic salts. By Fikentscher and Hagen. Jul 20, 1937. In German. 1.50

1728-1733 PB L 70332 — Crystallization trials with urea. By Wurzschmitt and Zimmermann. Jul 29, 1937. In German. 1.50

1734-1745 PB L 70332 — Determination of the constitution of "Lithosol Rubin 3G" (du Pont). By Kirsch. Aug 19, 1937. In German. 1.50

1746-1749 PB L 70332 — Specific gravity of powder and highly viscous liquids. By Schuhknecht. Aug 24, 1937. In German. 1.50

1750-1753 PB L 70332 — Density variations of the auxiliary liquid during the determination of the specific gravity of powder. By Schuhknecht. Aug 26, 1937. In German. 1.50

1754-1767 PB L 70332 — Determination of the constitution of three Solacet colors of the I. G. By Kirsch. Sep 1, 1937. In German. 1.50

1768-1774 PB L 70332 — Plasticizer B X X. By Fikentscher and Hagen. Sep 8, 1937. In German. 1.50

1775-1783 PB L 70332 — Catalytic hyrdogenation of nitrobenzene to aniline in liquid phase. By Schmidt and Wenderlein. Sep 16, 1937. In German. 1.50

1784-1788 PB L 70332 — 5-Azabenzanthrone. By Steigerwald. Sep 18, 1937. In German. 1.50

1789-1796 PB L 70332 — Testing heat resistance of chlorine-containing powdered plastic. By Kerekow. Sep 23, 1937. In German. 1.50

1797-1799 PB L 70332 — Sapidan LN conc. and Seprol (Boehme). By Kerekow. Oct 4, 1937. In German. 1.50

1800-1803 PB L 70332 — Copolymers with crotonic esters. By Hopff and Schulz. Oct 12, 1937. In German. 1.50

1804-1811 PB L 70332 — New copolymers with maleic- and fumaric esters. By Hopff. Oct 13, 1937. In German. 1.50

1812-1819 PB L 70332 — Butadiene from Butane. By Schmidt and Stadelmann. Oct 12, 1937. In German. 1.50

1820-1831 PB L 70332 — Continuous emulsion polymerization. By Fikentscher. Oct 13, 1937. In German. 1.50

1832-1834 PB L 70332 — New condensation products from vinylmethylketone and formaldehyde. By Hopff. Oct 13, 1937. In German. 1.50

1835-1856 PB L 70332 — Acetaldehyde from acetylene via vinylmethyl ether. By Reppe. Oct. 13, 1937. In German. 2.50

1857-1861 PB L 70332 — Water-soluble acrylic polymers and copolymers. By Fikentscher and Hagen. Oct 16, 1937. In German. 1.50

1862-1867 PB L 70332 — Linkage of iron in Vulcan Green B extra. By Wurzschmitt and Zimmermann. Nov 1, 1937. In German. 1.50

1868-1878 PB L 70332 — Relation between quantity used and efficiency of an analytic method. By Wurzschmitt and Zimmermann. Nov 1, 1937 and Mar 16, 1938. In German. Several frames illegible. 1.50

1879-1880 PB L 70332 — Substantive diazo dyes. Nov 5, 1937. In German. 1.50

PB L 70332-S I. G. FARBENINDUSTRIE A. G., LUDWIGSHAFEN, GERMANY. Dyes and dye intermediates. Polymerization products. (FIAT Microfilm Reel C-1, Frames 1-1880, abstract cards) 1935-1937. 201 p. Price: Microfilm-$5.00 - Photostat-$14.00.

Brief abstracts are presented of the individual items of FIAT Microfilm Reel C-1 (PB 70332) listed above. The abstracts were prepared by FIAT personnel in Germany.

Analytical Chemistry

PB L 70188. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel O 37, Frames 5319-6370) (See also FIAT Microfilm Reels O 22, PB 70062; O 38, PB 70189 and O 39, PB 70190) 1924-1945. 1051 f. Price: Microfilm-$6.00 - Enlargement print-$105.50

This microfilm reel was prepared by FIAT personnel in Germany. The reel contains a group of analytical procedures listed on Frames 5319 to 5458, not otherwise numbered. Following this is an alphabetical listing of substances for which analytical procedures have been outlined by I. G.; this list is indexed to the procedures which are assigned numbers. The individual procedures then follow, listed in numerical order from 1 to 194. Procedure number 194 is continued on Frame 6371 of FIAT Reel O 38, PB 70189, below. The individual items (procedures) are listed below and will be available as enlargement prints. The entire reel may be obtained as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
5319-5320 PB L 70188	Calcium arsenate. Aug 10, 1944. In German.	$1.50
5321 PB L 70188	Determination of mercury in "ceresane." By Hodes. n. d. In German.	1.50
5322 PB L 70188	Sulfur determination in naphthol tar acid. By Hodes. n. d. In German.	1.50
5323-5326 PB L 70188	Determination of dissolved oxygen in water. By Zimmermann. Sep 11, 1942. In German.	1.50
5327 PB L 70188	Quick methods for the determination of calcium nitrate, nickel nitrate and zinc nitrate. By Mühn. Mar 16, 1943. In German.	1.50
5328 PB L 70188	Determination of dissolved oxygen in water without using potassium iodide. Jan 16, 1945. In German.	1.50
5329-5333 PB L 70188	Determination of hydrogen chloride in chloroprene. By Bondel. Oct 10, 1944. In German.	1.50
5334-5335 PB L 70188	Determination of methylol compounds of urea. Sep 2, 1943. In German.	1.50
5336-5339 PB L 70188	Analysis of plastics. By Blumrich and Bandel. Jan 14, 1943. In German.	1.50

5340 PB L 70188 — Vinyl acetate. By Mühn. Feb 11, 1943. In German. 1.50

5341 PB L 70188 — Determination of tricresol phosphate and phthalic acid dibutyl ester in polyvinyl acetate emulsion. Feb 23, 1942. In German. 1.50

5342 PB L 70188 — Determination of color number in plastics. By Bandel. Jun 5, 1942. In German. 1.50

5343 PB L 70188 — Determination of hydroxyl groups by acetylation. By Bandel. Aug 14, 1942. In German. 1.50

5344 PB L 70188 — Determination of impurities, especially of ethylene oxide derivatives in technical vinyl acetate. By Blumrich. Jul 1, 1942. In German. 1.50

5345-5346 PB L 70188 — Detection and approximate quantitative determination of small amounts of boron and fluorine in "Oppanol." n. d. In German. 1.50

5347-5348 PB L 70188 — Saponification speed of "Mowillith" and "Acronal" samples. By Bandel. Jan 5, 1942. In German. 1.50

5349-5351 PB L 70188 — Determination of aldehyde and ketone groups in polyvinyl acetal and polyvinyl ketal. By Blumrich and Bandel. Jan 29, 1941. In German. 1.50

5352 PB L 70188 — Examination of a "Movital" sample. By Blumrich and Bandel. Mar 15, 1941. In German. 1.50

5353 PB L 70188 — Detection of condensation products of urea and formaldehyde on the fiber. By Bandel. Mar 17, 1941. In German. 1.50

5354-5358 PB L 70188 — Determination of aldehyde, ketone, and hydroxyl groups in polyvinyl-acetals. By Bandel. Mar 20, 1941. In German. 1.50

5359-5360 PB L 70188 — Examination of polyvinyl alcohol. By Bandel. Jul 22, 1941. In German. 1.50

5361-5362 PB L 70188 — Determination of water-solubility of softeners. By Bandel. Jun 30, 1941. In German. 1.50

5363-5364 PB L 70188 — Condensation of urea with formaldehyde. By Bandel. Sep 2, 1943. In German. 1.50
This report is identical with the report of Frames 5334-5335.

5365-5372 PB L 70188 — Microanalytic determination of mercury. By Zimmermann. Feb 2, 1937. In German. 1.50

5373-5374 PB L 70188 — Correspondence. n. d. In German. 1.50

5375-5376 PB L 70188 — Microanalytic separation of iodine, chlorine and bromine. Jan 26, 1938. In German. 1.50

5377 PB L 70188 — Correspondence. n. d. In German. 1.50

5378-5379 PB L 70188 — Micro method by Flaschenträger. Feb 1, 1939. In German. 1.50

5380-5382 PB L 70188 — Correspondence. By Wurzschmitt. Jun 19, 1940. In German. 1.50

5383-5384 PB L 70188 — Micro-determination of iodine. By Kröcker. May 19, 1941. In German. 1.50

5385-5389 PB L 70188 — Improvements in micro-dumas N determination. By Kröcker. May 17, 1941. In German. 1.50

5390-5392 PB L 70188 — Detection of casein fiber in mixed textiles. Nov 14, 1938. In German. 1.50

5393 PB L 70188 — Fat determination in textiles. By Gutenechn. Jan 17, 1931. In German. 1.50

5394-5395 PB L 70188 — Determination of aluminum and chlorine on the fiber. Oct 22, 1941. In German. 1.50

5396-5397 PB L 70188 — Flash point and explosion range of ethyleneimide. May 27, 1942. In German. 1.50

5398-5400 PB L 70188 — Determination of the explosion range of the vapors of a homogeneous liquid in air or in oxygen. May 27 1942. In German. 1.50

5401-5414 PB L 70188 — Detection and determination by distillation of volatile acids present simultaneously in dilute aqueous solution. By Blumrich and Bandel. Aug 26, 1942. In German. 1.50

5415-5417 PB L 70188 — Electrically heated hot air bath. By Zinneke. Jan 20, 1941. In German. 1.50

5418-5440 PB L 70188 — Distillation of ternary mixtures having a miscibility gap and no minimum boiling point. Oct 31, 1940. In German. 2.50

5441-5443 PB L 70188 — Standard column. Nov 9, 1943. In German. 1.50

5444-5453 PB L 70188 — Fine fractionation of liquid mixtures. By Blumrich. May 13, 1941. In German. 1.50

5454-5458 PB L 70188 — Fractionation of small quantities of substance. By Dott. Jun 27, 1940. In German. 1.50

5459-5516 PB L 70188 — List of I.G. analyses 1 to 600. Sep 23, 1938. In German. 6.00

5517 PB L 70188 — I. G. analyses 1 to 150. n. d. In German. 1.50

5518-5521 PB L 70188 — Benzaldehyde-2-sulfonic acid. May 1936. In German. 1.50
Analysis No. 1.

5522-5523 PB L 70188 — Tetramethyl diaminodiphenyl methane. May 1936. In German. 1.50
Analysis No. 2.

5524-5526 PB L 70188 — Tetramethyl-diaminodiphenyl-carbinol. May 1936. In German. 1.50
Analysis No. 3.

5527-5528 PB L 70188 — Tetraethyl diaminodiphenyl-carbinol. May 1936. In German. 1.50
Analysis No. 4.

5529-5532 PB L 70188 — 2-Naphthol-3,6-disulfonic acid (R-salt). May 1936. In German. 1.50
Analysis No. 5.

5533-5534 PB L 70188 — Naphthalene-2-monosulfonic acid. May 1936. In German. 1.50
Analysis No. 6.

5535-5538 PB L 70188 — 1-Hydroxybenzaldehyde. May 1936. In German. 1.50
Analysis No. 7.

5539-5541 PB L 70188 — 3-Nitrobenzaldehyde. May 1936. In German. 1.50
Analysis No. 8.

5542-5545 PB L 70188 — 1,8-Dihydroxy naphthalene-4-sulfonic acid. May 1936. In German. 1.50
Analysis No. 9.

5546-5550 PB L 70188 — 1,3-Phenylene diamine. May 1936. In German. 1.50
Analysis No. 10.

5551-5553 PB L 70188 — 2,4-Toluylene diamine. May 1936. In German. 1.50
Analysis No. 11.

5554-5556 PB L 70188 — 1,3-Phenylene diamine-4-sulfonic acid. May 1936. In German. 1.50
Analysis No. 12.

5557-5559 PB L 70188 — 2,4-Toluylene diamine-5-sulfonic acid. May 1936. In German. 1.50
Analysis No. 13.

5560-5562 PB L 70188 — 2-Naphthol-6-sulfonic acid. May 1936. In German. 1.50
Analysis No. 14.

5563-5564 PB L 70188 — 2-Naphthol-8-sulfonic acid. May 1936. In German. 1.50
Analysis No. 15.

5565-5568 PB L 70188 — 4-Hydroxy-2,4-dinitro-diphenylamine. May 1936. In German. 1.50
Analysis No. 16.

5569-5570 PB L 70188 — 4-Aminophenol. May 1936. In German. 1.50
Analysis No. 17.

5571-5575 PB L 70188 — Method of diazotation. Nov 1936. In German. 1.50
Analysis No. 18.

5576-5585 PB L 70188 — Coupling method. Nov 1936. In German. 1.50
Analysis No. 19.

5586-5588 PB L 70188 — "IG" analysis procedure No. 20/Parts 1-33 (List). Jul 1937. In German. 1.50

5589-5596 PB L 70188 — Distilling method. Nov 1936. In German. 1.50
Analysis No. 20, part 1.

5597-5614 PB L 70188 — Determination of boiling range under reduced pressure. Mar 1939. In German. 2.00
Addition to Analysis No. 20, part 1.

5615-5621 PB L 70188 — Determination of solidifying point. Nov 1936. In German. 1.50
Analysis No. 20, part 2.

5622-5628 PB L 70188 — Determination of melting point. May 1937. In German. 1.50
Analysis No. 20, part 2a.

5629-5632 PB L 70188 — Determination of density. Nov 1936. In German. 1.50
Analysis No. 20, part 3.

5633-5644 PB L 70188 — Determination of water. May 1937. In German. 1.50
Analysis No. 20, part 4.

5645 PB L 70188 — Detection of unnitrated hydrocarbons in nitrohydrocarbons. Mar 1924. In German. 1.50
Analysis No. 20, part 5.

5646 PB L 70188 — Detection of unnitrated hydrocarbons in nitrohydrocarbons. Mar 1924. In German. 1.50
Analysis No. 20, part 6.

5647 PB L 70188 — Detection of trinitro-products in dinitro-hydrocarbons. Mar 1924. In German. 1.50
Analysis No. 20, part 7.

5648 PB L 70188 — Reduction of nitro-hydrocarbons with iron and hydrochloric acid. Mar 1924. In German. 1.50
Analysis No. 20, part 8.

5649-5651 PB L 70188 — Colorimetric determination of secondary aromatic amines in tertiary aromatic amines. Nov 1936. In German. 1.50
Analysis No. 20, part 9.

5652-5660 PB L 70188 — Sampling. Nov 1936. In German. 1.50
Analysis No. 20, part 10.

5661-5664 PB L 70188 — Ash determination in organic substances. Nov 1936. In German. 1.50
Analysis No. 20, part 11a.

5665-5667 PB L 70188 — Determination of reputative agents in organic dyes. n. d. In German. 1.50
Analysis No. 20, part 11b.

5668-5690 PB L 70188 — Determination of copper, lead and zinc in food dyes. Nov 1936. In German. 3.50
Analysis No. 20, part 12.

5691-5699 PB L 70188 — Determination of small amounts of arsenic in organic substances. Nov 20, 1936. In German. 1.50
Analysis No. 20, part 12a.

5700-5705 PB L 70188 — Determination of the hydroxyl group in alcohols and phenols. Oct 1937. In German. 1.50
Analysis No. 20, part 13.

5706 PB L 70188 — General method of saponification for determination of ester content. Oct 1927. In German. 1.50
Analysis No. 20, part 14.

5707 PB L 70188 — General methods of determination of constants in fats and oils. Oct 26, 1928. In German. 1.50
Analysis No. 20, part 15.

5708-5715 PB L 70188 — Examination methods for solvents. Oct 18, 1929. In German. 1.50
Analysis No. 20, part 16.

5716-5723 PB L 70188 — Examination of textile auxiliaries and similar products. Oct 18, 1929. In German. 1.50
Analysis No. 20, part 17.

5724-5728 PB L 70188 — Fatty alcohol sulfonates. Nov 1936. In German. 1.50
Analysis No. 20, part 17a.

5729-5732 PB L 70188 — Fatty alcohols. Nov 1936. In German. 1.50
Analysis No. 20, part 17b.

5733-5738 PB L 70188 — Simultaneous determination of metallic iron, ferrous oxide and ferric oxide. May 9, 1930. In German. 1.50
Analysis No. 20, part 18 - iron.

5738-5740 PB L 70188 — Determination of cupric oxide in the presence of cuprous oxide. May 9, 1930. In German. 1.50
Analysis No. 20, part 18 - copper.

5740-5741 PB L 70188 — Simultaneous determination of lead, lead oxide and lead dioxide. May 9, 1930. In German. 1.50
Analysis No. 20, part 18 - lead.

5742-5747 PB L 70188 — Determination of solubility. n. d. In German. 1.50
Analysis No. 20, part 19.

5748-5759 PB L 70188 — Determination of halogen and sulfur. Nov 1936. In German. 1.50
Analysis No. 20, part 20.

5760-5770 PB L 70188 — Determination of the nitro group. Nov 1936. In German. 1.50
Analysis No. 20, part 21.

5771-5772 PB L 70188 — Stability of diazo salts at high temperatures. Nov 1936. In German. 1.50
Analysis No. 20, part 22.

5773-5775 PB L 70188 — Testing of intermediate products and dyes as to their inflammability and explosive qualities. Nov 1936. In German. 1.50
Analysis No. 20, part 23.

5776 PB L 70188 — Hygroscopicity of washing agents. Nov 1936. In German. 1.50
Analysis No. 20, part 24.

5777-5778 PB L 70188 — Determination of traces of nitrogen in hydrocarbons and tar oils. Nov 1936. In German. 1.50
Analysis No. 20, part 25.

5779-5781 PB L 70188 — Light absorption and turbidity of solutions of intermediate products. Nov 1936. In German. 1.50
Analysis No. 20, part 26.

5782-5783 PB L 70188 — Loose weight. Nov 1936. In German. 1.50
Analysis No. 20, part 27.

5784-5787 PB L 70188 — High molecular alkylamines. Nov 1936. In German. 1.50
Analysis No. 20, part 28.

5788-5791 PB L 70188 — Determination of copper and manganese in fibers and dyes. 1937. In German. 1.50
Analysis No. 20, part 29.

5792-5793 PB L 70188 — Determination of sand and grit. May 1937. In German. 1.50
Analysis No. 20, part 30.

5794-5811 PB L 70188 — Examination of plastics. Mar 1938. In German. 2.00
Analysis No. 20, part 31.

5812-5815 PB L 70188 — Sublimation. Mar 1938. In German. 1.50
Analysis No. 2, part 32.

5816-5826 PB L 70188 — Determination of molecular weights. Oct 1940. In German. 1.50
Analysis No. 20, part 33.

5827-5840 PB L 70188 — Benzene and toluene. May 24, 1936. In German. 1.50
Analysis No. 21 and 22.

5841-5846 PB L 70188 — Naphthalene. May 1936. In German. 1.50
Analysis No. 23.

5847-5848 PB L 70188 — Pure nitrobenzene. May 1936. In German. 1.50
Analysis No. 24.

5849-5851 PB L 70188 — 2-Nitrotoluene. May 1936. In German. 1.50
Analysis No. 25.

5852-5853 PB L 70188 — 3-Nitrotoluene. May 1936. In German. 1.50
Analysis No. 26.

5854-5855 PB L 70188 — 4-Nitrotoluene. May 1936. In German. 1.50
Analysis No. 27.

5856-5857 PB L 70188 — Crude nitrotoluene. May 1936. In German. 1.50
Analysis No. 28.

5858-5859 PB L 70188 — Nitroxylene. May 1936. In German. 1.50
Analysis No. 29.

5860-5862 PB L 70188 — α-Nitronaphthalene. May 1936. In German. 1.50
Analysis No. 30.

5863-5866 PB L 70188 — Aniline. May 1936. In German. 1.50
Analysis No. 31.

5867-5871 PB L 70188 — Ortho-toluidine. May 1936. In German. 1.50
Analysis No. 32.

5872-5874 PB L 70188 — Meta-toluidine. May 1936. In German. 1.50
Analysis No. 33.

5875-5876 PB L 70188 — Para-toluidine. May 1936. In German. 1.50
Analysis No. 34.

5877-5882 PB L 70188 — Crude toluidine. May 1936. In German. 1.50
Analysis No. 35.

5883-5885 PB L 70188 — 1,3,4-Xylidine. May 1936. In German. 1.50
Analysis No. 36.

5886-5887 PB L 70188 — 1,2,4-Xylidine. May 1936. In German. 1.50
Analysis No. 37.

5888-5889 PB L 70188 — 1-Naphthylamine. May 1936. In German. 1.50
Analysis No. 38.

5890-5892 PB L 70188 — 2-Naphthylamine. May 1936. In German. 1.50
Analysis No. 39.

5893-5898 PB L 70188 — 1-Amino-8-naphthol-3,6-disulfonic acid (H-acid). May 1936. In German. 1.50
Analysis No. 40.

5899-5903 PB L 70188 — 1-Amino-8-naphthol-4,6-disulfonic acid (K-acid). May 1936. In German. 1.50
Analysis No. 41.

5904-5906 PB L 70188 — 1,8-Dihydroxynaphthalene-3,6-disulfonic acid (Chromotropic acid). May 1936. In German. 1.50
Analysis No. 42.

5907-5910 PB L 70188 — 1-Naphthylamine-3,8-disulfonic acid (Amino S acid). May 1936. In German. 1.50
Analysis No. 43.

5911 PB L 70188 — 1-Naphthol-3,8-disulfonic acid. May 1936. In German. 1.50
Analysis No. 44.

5912-5917 PB L 70188 — 2-Naphthylamine-5,7-disulfonic acid (Amino-I-acid). May 1936. In German. 1.50
Analysis No. 45.

5918-5920 PB L 70188 — 2-Amino-5-naphthol-7-sulfonic acid (I-acid). May 1936. In German. 1.50
Analysis No. 46.

5921-5923 PB L 70188 — 2-Amino-8-naphthol-6-sulfonic acid (gamma acid). May 1936. In German. 1.50
Analysis No. 47.

5924-5929 PB L 70188 — 2-Naphthylamine-3,6-disulfonic acid. May 1936. In German. 1.50
Analysis No. 48.

5930-5931 PB L 70188 — 2-Amino-3-naphthol-6-sulfonic acid (aminonaphthol-R-acid). May 1936. In German. 1.50
Analysis No. 49.

5932-5937 PB L 70188 — 1-Naphthylamine-4-sulfonic acid./; Crude naphthionacid and naphthionate:/. May 1936. In German. 1.50
Analysis No. 50.

1.50 5938-5939 PB L 70188 — 1-Naphthylamine-5-sulfonic acid. Nov 1936. In German. Analysis No. 51. 1.50

1.50 5940-5943 PB L 70188 — 1-Naphthylamine-6-sulfonic acid. Nov 1936. In German. Analysis No. 52. 1.50

1.50 5944-5947 PB L 70188 — 1-Naphthylamine-7-sulfonic acid. Nov 1936. In German. Analysis No. 53. 1.50

1.50 5948-5950 PB L 70188 — 1-Naphthylamine-8-sulfonic acid. Nov 1936. In German. Analysis No. 54. 1.50

1.50 5951-5956 PB L 70188 — Cleve's acid. Nov 1937. In German. Analysis No. 55. 1.50

1.50 5957-5961 PB L 70188 — Salicylic acid. Nov 1936. In German. Analysis No. 56. 1.50

1.50 5962-5964 PB L 70188 — Benzaldehyde. Nov 1936. In German. Analysis No. 57. 1.50

1.50 5965-5969 PB L 70188 — Azo-benzene. Nov 1936. In German. Analysis No. 58. 1.50

1.50 5970-5973 PB L 70188 — Aminoazo-benzene. Nov 1936. In German. Analysis No. 59. 1.50

1.50 5974-5976 PB L 70188 — Aminoazo-toluene. Nov 1936. In German. Analysis No. 60. 1.50

1.50 5977 PB L 70188 — Determination of the nitro group. Nov 1936. In German. Analysis No. 61. 1.50

1.50 5978-5981 PB L 70188 — 1,3-Dinitro-benzene. Nov 1936. In German. Analysis No. 62. 1.50

1.50 5982-5984 PB L 70188 — 2-Chloronitrobenzene. Nov 1936. In German. Analysis No. 63. 1.50

1.50 5985-5986 PB L 70188 — 4-Chloronitrobenzene. Nov 1936. In German. Analysis No. 64. 1.50

1.50 5987-5989 PB L 70188 — 2,4-Dinitrochlorobenzene. Nov 1936. In German. Analysis No. 65. 1.50

1.50 5990-5991 PB L 70188 — 2,5-Dichloronitrobenzene. Nov 1937. In German. Analysis No. 66. 1.50

1.50 5992-5994 PB L 70188 — 2,4-Dinitrotoluene. Nov 1937. In German. Analysis No. 67. 1.50

1.50 5995-5996 PB L 70188 — 4-Chloronitrobenzene-3-sulfonic acid. Nov 1936. In German. Analysis No. 68. 1.50

1.50 5997 PB L 70188 — 2-Chloronitrobenzene-5-sulfonic acid. Nov 1936. In German. Analysis No. 69. 1.50

1.50 5998-5999 PB L 70188 — 4-Nitrotoluene-2-sulfonic acid. Nov 1936. In German. Analysis No. 70. 1.50

1.50 6000 PB L 70188 — 2-Nitrotoluene-4-sulfonic acid. Nov 1936. In German. Analysis No. 71. 1.50

1.50 6001-6002 PB L 70188 — 2,4-Dinitrotoluene-6-sulfonic acid. Nov 1936. In German. Analysis No. 72. 1.50

6003-6004 PB L 70188 — 2,6-Dinitrotoluene-4-sulfonic acid. Nov 1936. In German. Analysis No. 73. 1.50

6005-6006 PB L 70188 — 2-Nitroaniline. Nov 1936. In German. Analysis No. 74. 1.50

6007-6009 PB L 70188 — 3-Nitroaniline. Nov 1936. In German. Analysis No. 75. 1.50

6010-6013 PB L 70188 — 4-Nitroaniline. Nov 1936. In German. Analysis No. 76. 1.50

6014-6018 PB L 70188 — 4-Nitroacetanilide. Nov 1936. In German. Analysis No. 77. 1.50

6019-6021 PB L 70188 — 1-Naphthol-5-sulfonic acid. Nov 1936. In German. Analysis No. 78. 1.50

6022-6025 PB L 70188 — Benzyl chloride. Nov 1936. In German. Analysis No. 79. 1.50

6026-6027 PB L 70188 — Benzoyl chloride. Nov 1936. In German. Analysis No. 80. 1.50

6028-6029 PB L 70188 — 2-Naphthylamine-3,6,8-trisulfonic acid. Nov 1936. In German. Analysis No. 81. 1.50

6030-6032 PB L 70188 — 2-Amino-8-naphthol-3,6-disulfonic acid. Nov 1936. In German. Analysis No. 82. 1.50

6033-6045 PB L 70188 — Manganese dioxide /:MnO_2:/ Nov 1936. In German. Analysis No. 83. 1.50

6046-6049 PB L 70188 — Lead dioxide. Nov 1936. In German. Analysis No. 84. 1.50

6050-6055 PB L 70188 — Zinc dust. Nov 1936. In German. Analysis No. 85. 1.50

6056-6060 PB L 70188 — Iron for reduction purposes. n. d. In German. Analysis No. 86. 1.50

6061-6063 PB L 70188 — Naphthol-1-carboxylic acid. Nov 1936. In German. Analysis No. 87. 1.50

6064-6067 PB L 70188 — Acetic anhydride. Nov 1936. In German. Analysis No. 88. 1.50

6068-6082 PB L 70188 — Sulfanilic acid; orthanilic acid; metanilic acid. Nov 1936. In German. Analyses Nos. 89-91. 1.50

6083-6085 PB L 70188 — 1-Naphthol (alpha naphthol). Nov 1936. In German. Analysis No. 92. 1.50

6086-6088 PB L 70188 — 2-Naphthol. Nov 1936. In German. Analysis No. 93. 1.50

6089 PB L 70183 — 2-Naphthol. By Elisa Ghigi. 1939. In German. Addition to Analysis No. 93. From Farmacista Ital. Nr. 8, 24(1939). 1.50

6090-6092 PB L 70188 — Benzidine. Nov 1936. In German. Analysis No. 94. 1.50

6093-6095 — Benzidine-chlorohydrate. Nov

6095 PB L 70188 — 1936. In German. Analysis No.95. — 1.50

6096-6097 PB L 70188 — "3-3'-Toluidinebase." n. d. In German. Analysis No. 96. — 1.50

6098-6099 PB L 70188 — "3-3'-Toluidine" hydrochloride. Nov 1936. In German. Analysis No. 97. — 1.50

6100 PB L 70188 — Dianisidine. n. d. In German. Analysis No. 98. — 1.50

6101-6103 PB L 70188 — Dianisidine-dichlorohydrate. Nov 1936. In German. Analysis No. 99. — 1.50

6104-6106 PB L 70188 — 1-Naphthylamine-4,6-disulfonic acid. Nov 1936. In German. Analysis No. 100. — 1.50

6107-6109 PB L 70188 — 2-Naphthylamine-4,6-disulfonic acid. May 1937. In German. Analysis No. 101. — 1.50

6110-6112 PB L 70188 — 1-Phenylnaphthylamine-6-sulfonic acid. May 1937. In German. Analysis No. 102. — 1.50

6113-6115 PB L 70188 — 1-Tolyl-naphthylamine-6-sulfonic acid. May 1937. In German. Analysis No. 103. — 1.50

6116-6118 PB L 70188 — Mixture of 1-naphthylamine-3,6-disulfonic acid and 1-naphthylamine-3,7-disulfonic acid. May 1937. In German. Analysis No. 104. — 1.50

6119-6120 PB L 70188 — 1,8-Aminonaphthol-4-sulfonic acid. May 1937. In German. Analysis No. 105. — 1.50

6121-6126 PB L 70188 — Methyl-aniline. May 1937. In German. Analyses Nos. 106 and 107. — 1.50

6127-6130 PB L 70188 — Methyl-2-toluidine, Ethyl-2-toluidine. May 1937. In German. Analyses Nos. 108 and 109. — 1.50

6131-6132 PB L 70188 — Benzyl-2-toluidine. May 1937. In German. Analysis No. 110. — 1.50

6133-6138 PB L 70188 — Dimethyl-aniline, Diethyl-aniline. May 1937. In German. Analyses Nos. 111 and 112. — 1.50

6139-6140 PB L 70188 — Dimethyl ortho toluidine. May 1937. In German. Analysis No. 113. — 1.50

6141-6142 PB L 70188 — Diethyl-ortho-toluidine. May 1937. In German. Analysis No. 114. — 1.50

6143-6144 PB L 70188 — Dibenzil-aniline. May 1937. In German. Analysis No. 115. — 1.50

6145-6148 PB L 70188 — Methyl benzyl aniline, Ethyl-benzyl-aniline. May 1937. In German. Analyses Nos. 116 and 117. — 1.50

6149-6151 PB L 70188 — Ethyl-benzyl-aniline-3'-sulfonic acid. May 1937. In German. Analysis No. 118. — 1.50

6152-6157 PB L 70188 — Ethyl-benzil-aniline-disulfonic acid. May 1937. In German. Analysis No. 118a. — 1.50

6158-6159 PB L 70188 — 4-Nitroso-dimethyl-aniline. Mar 1937. In German. Analysis No. 119. — 1.50

6160-6161 PB L 70188 — 4-Nitroso-diethyl-aniline. Nov 1937. In German. Analysis No. 120. — 1.50

6162 PB L 70188 — 5-Nitro-2-methyl-toluidine. May 1937. In German. Analysis No. 121. — 1.50

6163-6164 PB L 70188 — 4-Nitrosomethyl-benzyl-aniline-3'-sulfonic acid. n. d. In German. Analysis No. 122. — 1.50

6165-6166 PB L 70188 — 1-Nitroso-2-naphthol. May 1937. In German. Analysis No. 123. — 1.50

6167-6168 PB L 70188 — 1-Nitroso-2-naphthol-bisulfite. Mar 1937. In German. Analysis No. 124. — 1.50

6169-6170 PB L 70188 — 4-Aminodimethyl-aniline. May 1937. In German. Analysis No. 125. — 1.50

6171-6173 PB L 70188 — Acetoacetic ester. May 1937. In German. Analysis No. 126. — 1.50

6174-6176 PB L 70188 — 2-Chlorobenzaldehyde. May 1937. In German. Analysis No. 127. — 1.50

6177-6180 PB L 70188 — 2-Nitrobenzaldehyde, 4-Nitrobenzaldehyde. May 1937. In German. Analyses Nos. 128 and 129. — 1.50

6181-6184 PB L 70188 — 2- and 3-Nitrobenzaldehyde. May 1937. In German. Analysis No. 130. — 1.50

6185-6187 PB L 70188 — 3-Aminobenzaldehyde. May 1937. In German. Analysis No. 131. — 1.50

6188-6189 PB L 70188 — 4-Aminobenzaldehyde. May 1937. In German. Analysis No. 132. — 1.50

6190 PB L 70188 — 1-Amino-2-naphthol-4-sulfonic acid. May 1937. In German. Analysis No. 133. — 1.50

6191-6193 PB L 70188 — 1-Diazo-2-naphthol-4-sulfonic acid. May 1937. In German. Analysis No. 134. — 1.50

6194-6195 PB L 70188 — Acetyl-1,4-phenylene-diamine (mono). n. d. In German. Analysis No. 135. — 1.50

6196-6197 PB L 70188 — 4-Acetyltoluidine. Nov 1937. In German. Analysis No. 136. — 1.50

6198-6200 PB L 70188 — 3-Nitro-4-acetyltoluidine. May 1937. In German. Analysis No. 137. — 1.50

6201-6205 PB L 70188 — 3-Nitro-4-toluidine. May 1937. In German. Analysis No. 138. — 1.50

6206-6207 PB L 70188 — 1-Naphthylamine-2-sulfonic acid. May 1937. In German. Analysis No. 139. — 1.50

6208-6209 PB L 70188 — 1-Naphthylamine-3-sulfonic acid. May 1937. In German. Analysis No. 140. — 1.50

6210-6213 PB L 70188 — 1-Naphthol-4-sulfonic acid. May 1937. In German. Analysis No. 141. — 1.50

6214-6216 PB L 70188 — 2-Naphthylamine-6,8-disulfonic acid. May 1937. In German. Analysis No. 142. — 1.50

6217-6218 PB L 70188 — 2-Naphthylamine-1-sulfonic acid. May 1937. In German. Analysis No. 143. 1.50

6219-6223 PB L 70188 — 2-Naphthylamine-5-sulfonic acid; 2-naphthylamine-6-sulfonic acid; 2-naphthylamine-7-sulfonic acid; 2-naphthylamine-8-sulfonic acid. May 1937. In German. Analysis No. 144. 1.50

6224-6232 PB L 70188 — 2-Naphthylamine-6-sulfonic acid; 2-naphthylamine-7-sulfonic acid. n. d. In German. Analyses Nos. 145 and 146. 1.50

6233-6238 PB L 70188 — 2-Naphthylamine-5-sulfonic acid and 2-naphthylamine-8-sulfonic acid. May 1937. In German. Analyses Nos. 147 and 148. 1.50

6239-6240 PB L 70188 — 4-Nitro-2-aminonaphthol. May 1937. In German. Analysis No. 149. 1.50

6241 PB L 70188 — 1-Acetylnaphthylamine-6-sulfonic acid. n. d. In German. Analysis No. 150. 1.50

6242-6244 PB L 70188 — 1-Acetylamino-naphthalene-7-sulfonic acid. Nov 1937. In German. Analysis No. 151. 1.50

6245-6250 PB L 70188 — 4-Nitro-1-acetylamino-naphthalene-7-sulfonic acid and 4-nitro-1-acetylamino-naphthalene-6-sulfonic acid. n. d. In German. Analyses Nos. 152 and 153. 1.50

6251-6252 PB L 70188 — 4-Amino-1-acetylamino-naphthalene-6-sulfonic acid. Nov 1937. In German. Analysis No. 154. 1.50

6253-6254 PB L 70188 — 4-Amino-1-acetylamino-naphthalene-7-sulfonic acid. Nov 1937. In German. Analysis No. 155. 1.50

6255 PB L 70188 — Monochlorobenzene. Nov 1937. In German. Analysis No. 156. 1.50

6256-6258 PB L 70188 — 1,2-Dichlorobenzene. Nov 1937. In German. Analysis No. 157. 1.50

6259-6260 PB L 70188 — 1,4-Dichlorobenzene. Nov 1937. In German. Analysis No. 158. 1.50

6261-6263 PB L 70188 — Phenol. Nov 1937. In German. Analysis No. 159. 1.50

6264-6266 PB L 70188 — Sodium phenolate. Nov 1937. In German. Analysis No. 160. 1.50

6267-6274 PB L 70188 — Chlorophenols. Nov 1937. In German. Analysis No. 161. 1.50

6275-6282 PB L 70188 — 2,4-Dichlorophenol, 2,6-dichlorophenol, and 2,4,6-trichlorophenol in the presence of each other. Nov 1937. In German. Analysis No. 161, Part II. 1.50

6283-6284 PB L 70188 — 2,4,6-Trichlorophenol. May 1937. In German. Analysis No. 161, Part III. 1.50

6285-6287 PB L 70188 — 2-Nitrophenol (o-nitrophenol). May 1937. In German. Analysis No. 162. 1.50

6288-6291 PB L 70188 — 4-Nitrophenol. May 1937. In German. Analysis No. 163. 1.50

6292-6296 PB L 70188 — 2,4-Dinitrophenol. May 1937. In German. Analysis No. 164. 1.50

6297-6300 PB L 70188 — 2,4,6-Trinitrophenol. Nov 1937. In German. Analysis No. 165. 1.50

6301-6302 PB L 70188 — 4-Chloro-2-nitrophenol. Nov 1937. In German. Analysis No. 166. 1.50

6303-6304 PB L 70188 — 2,6-Dichloro-4-nitrophenol. Nov 1937. In German. Analysis No. 167. 1.50

6305-6306 PB L 70188 — 2,6-Dinitro-4-chlorophenol. Nov 1937. In German. Analysis No. 168. 1.50

6307-6308 PB L 70188 — 2,4-Dinitro-6-chlorophenol. Nov 1937. In German. Analysis No. 169. 1.50

6309-6310 PB L 70188 — 2-Nitroanisol. Nov 1937. In German. Analysis No. 170. 1.50

6311-6312 PB L 70188 — 2,4-Dinitrophenol. May 1937. In German. Analysis No. 171. 1.50

6313-6314 PB L 70188 — 4-Nitrophenetol. Nov 1937. In German. Analysis No. 172. 1.50

6315-6316 PB L 70188 — 2-Amino-4-sulfonic acid. Nov 1937. In German. Analysis No. 173. 1.50

6317-6318 PB L 70188 — 6-Nitro-2-aminophenol-4-sulfonic acid. Nov 1937. In German. Analysis No. 174. 1.50

6319-6320 PB L 70188 — 4-Chloro-2-aminophenol-6-sulfonic acid. Nov 1937. In German. Analysis No. 175. 1.50

6321-6324 PB L 70188 — Phenylhydrazine-4-sulfonic acid. Nov 1937. In German. Analysis No. 176. 1.5

6325-6328 PB L 70188 — 2-Chlorophenylhydrazine-4-sulfonic acid. Nov 1937. In German. Analysis No. 177. 1.50

6328-6329 PB L 70188 — 1-(2'-Chloro-4'-sulfo-phenyl)-3-methyl-5-pyrazolone. Nov 1937. In German. Analysis No. 178. 1.50

6330 PB L 70188 — "Chlorpyrazolsäure 5." n. d. In German. 2d page of 2 pages of Analysis No. 179. 1.50

6331-6335 PB L 70188 — 2,6-Dinitrochlorobenzene-4-sulfonic acid. Nov 1937. In German. Analysis No. 180. 1.5

6336-6337 PB L 70188 — 2-Naphthol-6,8-disulfonic acid. Nov 1937. In German. Analysis No. 181. 1.5

6338-6339 PB L 70188 — 2-Phenylamino-5-naphthol-7-sulfonic acid. Nov 1937. In German. Analysis No. 182. 1.5

6340-6341 PB L 70188 — 2-Phenylamino-8-naphthol-6-sulfonic acid. Nov 1937. In German. Analysis No. 183. 1.5

6342-6343 PB L 70188 — 1-Amino-8-naphthol-2,4-disulfonic acid. Nov 1937. In German. Analysis No. 184. 1.5

6344-6346 PB L 70188 — 1,5-Dihydroxynaphthalene. Nov 1937. In German. Analysis No. 185. 1.5

Analytical Chemistry (contd)

6347-6349 PB L 70188 — Dehydrothio-4-toluidine (6-methyl-2-(4-aminophenyl)-benzothiazole). Nov 1937. In German. 1.50
Analysis No. 186.

6350-6352 PB L 70188 — Dehydrothio-4-toluidine-sulfonic acid. Nov 1937. In German. 1.50
Analysis No. 187.

6353-6355 PB L 70188 — Primulin. Nov 1937. In German. 1.50
Analysis No. 188.

6356-6357 PB L 70188 — Diphenylamine. Nov 1937. In German. 1.50
Analysis No. 189.

6358-6359 PB L 70188 — Dihydroxytartrate - sodium. n. d. In German. 1.50
Analysis No. 190.

6360-6361 PB L 70188 — 4-Toluenesulfochloride. Nov 1937. In German. 1.50
Analysis No. 191.

6362-6365 PB L 70188 — Methanol. Nov 1937. In German. 1.50
Analysis No. 192.

6366-6367 PB L 70188 — Methylchloride. Nov 1937. In German. 1.50
Analysis No. 193.

6368-6370 PB L 70188 — Acetone. Nov 1937. In German. 1.50
Analysis No. 194.

PB L 70188-S. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel O 37, Frames 5319-6370, abstract cards) 1924-1945. 285 p. Price: Microfilm-$6.00 - Photostat-$19.00
Brief abstracts of the individual items on the above FIAT microfilm reel O 37, PB L 70188, prepared by FIAT personnel in Germany.

PB L 70189. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel O 38, Frames 6371-6519 and 6620-7320) (See also FIAT Microfilm Reels O 22, PB 70062; O 37, PB 70188; and O 39, PB 70190) 1937-1942. 749 f. Price: Microfilm-$6.00 - Enlargement print-$75.00
This microfilm reel is a continuation of the listing of analytical procedures contained in FIAT microfilm reel O 37, PB L 70188, above. This reel includes procedures numbered from 195 to 500, inclusive. Individual items are listed below and will be available as enlargement prints. The entire reel may be obtained as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
6371 PB L 70189	Page 4 of Analysis No. 194, which is on reel O 37, PB L 70188, above.	$1.50
6372-6374 PB L 70189	Xylene. Nov 1937. In German. Analysis No. 195.	1.50
6375-6383 PB L 70189	Acetic acid. Nov 1937. In German. Analysis No. 196.	1.50
6384-6386 PB L 70189	Crude cresol. Nov 1937. In German. Analysis No. 197.	1.50
6387-6388 PB L 70189	Ortho-cresol. Nov 1937. In German. Analysis No. 198.	1.50
6389-6390 PB L 70189	Meta-cresol. Nov 1937. In German. Analysis No. 199.	1.50
6391-6392 PB L 70189	Para-cresol. Nov 1937. In German. Analysis No. 200.	1.50
6393-6394 PB L 70189	3-Nitro-4-cresol. Mar 1938. In German. Analysis No. 201.	1.50
6395-6396 PB L 70189	3-Nitro-4-cresol methyl ether. Mar 1938. In German. Analysis No. 202.	1.50
6397-6401 PB L 70189	Pyrocatechol monomethyl ether. Mar 1938. In German. Analysis No. 203.	1.50
6402-6404 PB L 70189	Resorcinol. Mar 1938. In German. Analysis No. 204.	1.50
6405-6406 PB L 70189	Hydroquinone. Mar 1938. In German. Analysis No. 205.	1.50
6407-6408 PB L 70189	Pyrogallol. Mar 1938. In German. Analysis No. 206.	1.50
6409-6410 PB L 70189	2,4-Dinitraniline. Mar 1938. In German. Analysis No. 207.	1.50
6411-6412 PB L 70189	4-Nitro-1,3-phenylenediamine. Mar 1938. In German. Analysis No. 208.	1.50
6413-6414 PB L 70189	3-Nitro-4-amino-acetanilide. Mar 1938. In German. Analysis No. 209.	1.50
6415-6416 PB L 70189	2,6-Toluylene diamine. Mar 1938. In German. Analysis No. 210.	1.50
6417-6418 PB L 70189	2,6-Toluylenediamine-4-sulfonic acid. Mar 1938. In German. Analysis No. 211.	1.50
6419-6422 PB L 70189	1,4-Phenylene-diamine. Mar 1938. In German. Analysis No. 212.	1.50
6423-6427 PB L 70189	Determination of naphthalene-1-mono-sulfonic acid in the naphthalene sulfonation mixture (alpha acid). Mar 1938. In German. Analysis No. 213.	1.50
6428-6432 PB L 70189	Determination of the naphthalene-2-monosulfonic acid in the naphthalene sulfonation mixture. Mar 1938. In German. Analysis No. 214.	1.50
6433-6436 PB L 70189	Determination of 2,6- and 2,7-naphthalene disulfonic acid in the naphthalene sulfonation mixture. (Naphthalene di-acid 26 and naphthalene acid F.) Mar 1938. In German. Analysis No. 215.	1.50
6437-6439 PB L 70189	Naphthalene-2,6-disulfonic acid. (Naphthalene acid 26.) Mar 1938. In German. Analysis No. 216.	1.50
6440-6442 PB L 70189	Naphthalene 2,7-disulfonic acid. (Naphthalene diacid F.) Mar 1938. In German. Analysis No. 217.	1.50
6443-6444 PB L 70189	N-Ethyl-1-naphthylamine. Mar 1938. In German. Analysis No. 218.	1.50

6445-6446 PB L 70189 — Diethyl-1-naphthylamine. Mar 1938. In German. Analysis No. 219. 1.50

6447-6449 PB L 70189 — 1-Phenyl-naphthylamine. Mar 1938. In German. Analysis No. 220. 1.50

6450-6452 PB L 70189 — N-Ethyl-2-naphthylamine. Mar 1938. In German. Analysis No. 221. 1.50

6453-6456 PB L 70189 — 2-Phenyl-naphthylamine. Mar 1938. In German. Analysis No. 222. 1.50

6457-6458 PB L 70189 — Phthalic acid anhydride. Mar 1938. In German. Analysis No. 223. 1.50

6459-6461 PB L 70189 — Benzoic acid. Mar 1938. In German. Analysis No. 224. 1.50

6462-6464 PB L 70189 — Sodium benzoate. Mar 1938. In German. Analysis No. 225. 1.50

6465-6467 PB L 70189 — 2-Aminophenol-6-carboxylic acid. Mar 1938. In German. Analysis No. 226. 1.50

6468-6469 PB L 70189 — 4-Aminophenol-2-carboxylic acid. Mar 1938. In German. Analysis No. 227. 1.50

6470-6472 PB L 70189 — 4-Nitraniline-2-sulfonic acid. Mar 1938. In German. Analysis No. 228. 1.50

6473-6475 PB L 70189 — 2-Nitraniline-4-sulfonic acid. Mar 1938. In German. Analysis No. 229. 1.50

6476-6478 PB L 70189 — 1-Naphthylamine-3,6,8-trisulfonic acid. Mar 1938. In German. Analysis No. 230. 1.50

6479-6481 PB L 70189 — 1-Naphthylamine-4,6,8-trisulfonic acid. Mar 1938. In German. Analysis No. 231. 1.50

6482-6483 PB L 70189 — Naphthylsulfamic acid. Mar 1938. In German. Analysis No. 232. 1.50

6484-6486 PB L 70189 — 4-Amino-azobenzene-4'-sulfonic acid. Mar 1938. In German. Analysis No. 233. 1.50

6487-6488 PB L 70189 — 4-Amino-azobenzene-3,4-disulfonic acid. Mar 1938. In German. Analysis No. 234. 1.50

6489-6490 PB L 70189 — 6-Nitro-1-amino-2-naphthol-4-sulfonic acid diazotized. Mar 1938. In German. Analysis No. 235. 1.50

6491-6492 PB L 70189 — Quinaldine. Mar 1938. In German. Analysis No. 236. 1.50

6493-6495 PB L 70189 — Chloroacetic acids. Monochloroacetic acids. Mar 1938. In German. Analysis No. 237. 1.50

6496-6497 PB L 70189 — Phosphorus trichloride. Mar 1938. In German. Analysis No. 238. 1.50

6498-6508 PB L 70189 — Sodium sulfide. Mar 1938. In German. Analysis No. 239. 1.50

6509-6511 — 2-Chlorotoluene. Mar 1938.

PB L 70189 — In German. Analysis No. 240. 1.50

6512 PB L 70189 — 4-Chloro-1-methyl-benzene. Mar 1938. In German. Analysis No. 241. 1.50

6513-6515 PB L 70189 — 2,6-Dichloro-4-nitraniline (dichloro-p-nitraniline). Mar 1938. In German. Analysis No. 242. 1.50

6516-6517 PB L 70189 — Acetanilide. Mar 1938. In German. Analysis No. 243. 1.50

6518-6620 PB L 70189 — 3-Chloro-aniline. Mar 1938. In German. Analysis No. 244. 100 frames were left out of this report due to faulty numbering. 1.50

6621-6623 PB L 70189 — 4-Chloraniline. Mar 1938. In German. Analysis No. 245. 1.50

6624-6625 PB L 70189 — 2,5-Dichloraniline. Mar 1938. In German. Analysis No. 246. 1.50

6626-6627 PB L 70189 — 2-Aminophenol. Mar 1938. In German. Analysis No. 247. 1.50

6628 PB L 70189 — 3-Aminophenol. Mar 1938. In German. Analysis No. 248. 1.50

6629-6630 PB L 70189 — 4-Chloro-2-aminophenol. Mar 1938. In German. Analysis No. 249. 1.50

6631-6632 PB L 70189 — 5-Nitro-2-aminophenol. Mar 1938. In German. Analysis No. 250. 1.50

6633-6634 PB L 70189 — 4,6-Dinitro-2-aminophenol. Mar 1938. In German. Analysis No. 251. 1.50

6635-6636 PB L 70189 — 2-Anisidine. Mar 1938. In German. Analysis No. 252. 1.50

6637-6638 PB L 70189 — 4-Phenetidine. Mar 1938. In German. Analysis No. 253. 1.50

6639-6640 PB L 70189 — 2,6-Dichloro-4-aminophenol. Mar 1938. In German. Analysis No. 254. 1.50

6641-6642 PB L 70189 — 1,5-Naphthylene diamine. Mar 1938. In German. Analysis No. 255. 1.50

6643-6645 PB L 70189 — 1,8-Naphthylene diamine. Mar 1938. In German. Analysis No. 256. 1.50

6646-6647 PB L 70189 — 1,5-Naphthylenediamine-3,7-disulfonic acid. Mar 1938. In German. Analysis No. 257. 1.50

6648 PB L 70189 — 1,8-Naphthylene diamine-4-sulfonic acid. Mar 1938. In German. Analysis No. 258. 1.50

6649-6650 PB L 70189 — 1,8-Naphthylenediamine-3,6-disulfonic acid. Mar 1938. In German. Analysis No. 259. 1.50

6651-6654 PB L 70189 — Formaldehyde. Mar 1938. In German. Analysis No. 260. 1.50

6655-6660 — Hydrosulfite and sulfoxylates.

PB L 70189 Mar 1938. In German. 1.50
Analysis No. 261.

6661-6664
PB L 70189 Sodium dithionite ($Na_2S_2O_4$). Mar 1938. In German. 1.50
Analysis No. 261a.

6665-6666
PB L 70189 1,4-Benzoquinone. Mar 1938. In German. 1.50
Analysis No. 262.

6667-6668
PB L 70189 1,2-Naphthoquinone. n. d. In German. 1.50
Analysis No. 263.

6669-6673
PB L 70189 Ethylchloride. Mar 1938. In German. 1.50
Analysis No. 264.

6674-6676
PB L 70189 2-Acetyltoluidine. Mar 1938. In German. 1.50
Analysis No. 265.

6677-6680
PB L 70189 4,4'-Dinitrostilbene-2,2'-disulfonic acid ("Nitrostilbensäure L"). Mar 1938. In German. 1.50
Analysis No. 266.

6681-6684
PB L 70189 4,4'-Diaminostilbene-2,2'-disulfonic acid. (Flavone acid.) Mar 1938. In German. 1.50
Analysis No. 267.

6685-6686
PB L 70189 1,5-Dinitronaphthalene. Mar 1938. In German. 1.50
Analysis No. 268.

6687-6689
PB L 70189 1,8-Dinitronaphthalene. Mar 1938. In German. 1.50
Analysis No. 269.

6690-6691
PB L 70189 2-Naphthol-7-sulfonic acid. Mar 1938. In German. 1.50
Analysis No. 270.

6692-6693
PB L 70189 Mixture of 2-naphthol-7-sulfonic acid and 2-naphthol. Mar 1938. In German. 1.50
Analysis No. 271.

6694-6695
PB L 70189 1-Naphthol-3,6-disulfonic acid. Mar 1938. In German. 1.50
Analysis No. 272.

6696-6697
PB L 70189 1,8-Naphthosultam-2,4-disulfonic acid. Mar 1938. In German. 1.50
Analysis No. 273.

6698-6699
PB L 70189 4-Nitrosophenol. Mar 1938. In German. 1.50
Analysis No. 274.

6700-6701
PB L 70189 4-Amino-diphenylamine. Mar 1938. In German. 1.50
Analysis No. 275.

6702-6704
PB L 70189 4-Amino-diphenylamine-2-sulfonic acid. Mar 1938. In German. 1.50
Analysis No. 276.

6705-6706
PB L 70189 4,4'-Diaminodiphenyl-amine. Mar 1938. In German. 1.50
Analysis No. 277.

6707-6709
PB L 70189 4,4'-Diaminodiphenylamine-2-sulfonic acid. Mar 1938. In German. 1.50
Analysis No. 278.

6710-6715
PB L 70189 Naphthalene-1,5-disulfonic acid. Mar 1938. In German. 1.50
Analysis No. 279.

6716-6719
PB L 70189 Naphthalene-1,6-disulfonic acid. Mar 1938. In German. 1.50
Analysis No. 280.

6720-6721
PB L 70189 3,3'-Dichlorobenzidine. Mar 1938. In German. 1.50
Analysis No. 281.

6722-6723
PB L 70189 4-Chloro-2-nitroaniline. Mar 1938. In German. 1.50
Analysis No. 282.

6724-6725
PB L 70189 2-Chloro-4-nitroaniline. Mar 1938. In German. 1.50
Analysis No. 283.

6726-6728
PB L 70189 4-Nitro-2-anisidine. Mar 1938. In German. 1.50
Analysis No. 284.

6729-6731
PB L 70189 5-Nitro-2-anisidine. Mar 1938. In German. 1.50
Analysis No. 285.

6732-6733
PB L 70189 4-Chloro-2-anisidine. Mar 1938. In German. 1.50
Analysis No. 286.

6734-6735
PB L 70189 Benzidine-3-sulfonic acid. Mar 1938. In German. 1.50
Analysis No. 287.

6736-6738
PB L 70189 Benzidine 3,3'-disulfonic acid. Mar 1938. In German. 1.50
Analysis No. 288.

6739-6742
PB L 70189 Aniline-2,5-disulfonic acid. Mar 1938. In German. 1.50
Analysis No. 289.

6743-6744
PB L 70189 Aniline-2,4-disulfonic acid. Mar 1938. In German. 1.50
Analysis No. 290.

6745-6747
PB L 70189 Aceto-4-phenetidine. Mar 1938. In German. 1.50
Analysis No. 291.

6748-6749
PB L 70189 2,3,5,6-Tetrachlorobenzoquinone. Mar 1938. In German. 1.50
Analysis No. 292.

6750-6751
PB L 70189 2-Methylindole. Mar 1938. In German. 1.50
Analysis No. 293.

6752
PB L 70189 3-Amino-4-cresol. Mar 1938. In German. 1.50
Analysis No. 294.

6753
PB L 70189 3-Amino-4-cresol methyl ether. Mar 1938. In German. 1.50
Analysis No. 295.

6754-6756
PB L 70189 Cyclo-hexanone. Mar 1938. In German. 1.50
Analysis No. 296.

6757
PB L 70189 3-Methyl cyclohexanone. Mar 1938. In German. 1.50
Analysis No. 297.

6758-6759
PB L 70189 3-Nitrobenzene-1-sulfonic acid. Mar 1938. In German. 1.50
Analysis No. 298.

6760-6761
PB L 70189 2-Cresol-3-carboxylic acid. Mar 1938. In German. 1.50
Analysis No. 299.

6762-6763
PB L 70189 4-Cresol-3-carboxylic acid. Mar 1938. In German. 1.50
Analysis No. 300.

6764
PB L 70189 4,4'-Diaminodiphenylmethane. Mar 1939. In German. 1.50
Analysis No. 301.

6765
PB L 70189 4,4'-Diaminotriphenylmethane. Mar 1939. In German. 1.50
Analysis No. 302.

6766
PB L 70189 4,4'-Diamino-2,2'-ditolyl methane. Mar 1939. In German. 1.50
Analysis No. 303.

6767-6769
PB L 70189 Dimethyl-1-naphthylamine. Mar 1939. In German. 1.50
Analysis No. 304.

6770-6771 PB L 70189 — 1,3-Phenylenediamine-4,6-disulfonic acid. Mar 1939. In German. Analysis No. 305. — 1.50

6772-6775 PB L 70189 — Dimethylsulfate. Mar 1939. In German. Analysis No. 306. — 1.50

6776-6778 PB L 70189 — Urea from 2-amino-5-naphthol-7-sulfonic acid (J-acid). Mar 1939. In German. Analysis No. 307. — 1.50

6779-6781 PB L 70189 — Sulfur trioxide. Mar 1939. In German. Analysis No. 308. — 1.50

6782-6784 PB L 70189 — Sulfuric acid monohydrate. Mar 1939. In German. Analysis No. 309. — 1.50

6785-6796 PB L 70189 — Sulfuric acid 96% and 66%. Mar 1939. In German. Analyses Nos. 310 and 311. — 1.50

6797-6802 PB L 70189 — Pyrite, iron sulfide roasted ore. Mar 1939. In German. Analysis No. 312. — 1.50

6803 PB L 70189 — Cement copper. Feb 1942. In German. Analysis No. 313. — 1.50

6804-6809 PB L 70189 — Nitric acid. Feb 1942. In German. Analysis No. 314. — 1.50

6810-6811 PB L 70189 — Mixed acid (mixture of nitric acid and sulfuric acid). Mar 1939. In German. Analysis No. 315. — 1.50

6812-6814 PB L 70189 — Sodium chloride. Mar 1938. In German. Analysis No. 316. — 1.50

6815-6818 PB L 70189 — Hydrochloric acid. Mar 1939. In German. Analysis No. 317. — 1.50

6819-6821 PB L 70189 — Sodium sulfate. Mar 1939. In German. Analysis No. 318. — 1.50

6822-6825 PB L 70189 — Sodium hydroxide solution. Mar 1939. In German. Analysis No. 319. — 1.50

6826-6829 PB L 70189 — Soda. Mar 1939. In German. Analysis No. 320. — 1.50

6830-6832 PB L 70189 — Chlorosulfonic acid. Mar 1939. In German. Analysis No. 321. — 1.50

6833 PB L 70189 — Methylene chloride. Mar 1939. In German. Analysis No. 322. — 1.50

6834-6835 PB L 70189 — Chloroform. Mar 1939. In German. Analysis No. 323. — 1.50

6836-6837 PB L 70189 — Carbon tetrachloride. Mar 1939. In German. Analysis No. 324. — 1.50

6838-6841 PB L 70189 — Ethyl alcohol. Mar 1939. In German. Analysis No. 325. — 1.50

6842 PB L 70189 — n-Butyl alcohol. Mar 1939. In German. Analysis No. 326. — 1.50

6843-6844 PB L 70189 — Glycol. Mar 1939. In German. Analysis No. 327. — 1.50

6845-7320 PB L 70189 — Analyses procedures from Nos. 328-500. In German. — 8.00

PB L 70189-S. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel G 38, Frames 6371-6519 and 6620-7320, abstract cards) 1937-1942. 143 p. Price: Microfilm-$3.00 - Photostat-$10.00

Brief abstracts of the individual items on the above FIAT microfilm reel G 38, PB L 70189, prepared by FIAT personnel in Germany. For abstract cards of procedures numbered between 328 and 500, see FIAT reel G 22, PB L 70062, below, which repeats part of this reel.

PB L 70062. I. G. FARBENINDUSTRIE A. G. FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel G-22, Frames 1-892) 1930-1944. 891 f. Price: Microfilm-$6.00 - Enlargement print-$89.50.

This microfilm was prepared by FIAT personnel in Germany. This reel continues the listing of analytical procedures in FIAT Reel G-38, PB 70189, above, beginning with procedure number 328 and continuing to 630, inclusive. Individual items are listed below and will be available as enlargement prints. The entire reel may be obtained as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items from this microfiln reel. In German.

Frames	Title	Price
1-3 PB L 70062	Crude glycerol. By W. Leitho. Nov 3, 1944. In German. I. G. Analysis No. 328.	$1.50
4-6 PB L 70062	Acetyl chloride. Mar 1939. In German. I. G. Analysis No. 329.	1.50
7-8 PB L 70062	Ethyl ether. Mar 1939. In German. Analysis No. 330.	1.50
9 PB L 70062	Ether. By Feller. Feb 7, 1943. In German. Addition to I. G. Analysis No. 330.	1.50
10 PB L 70062	Ethyl acetate. Mar 1939. In German. Analysis No. 331.	1.50
11-12 PB L 70062	Amyl Acetate. Mar 1939. In German. Analysis No. 332.	1.50
13-15 PB L 70062	Analysis of solvent naphtha. Mar 1939. In German. Analysis No. 333.	1.50
16 PB L 70062	Acetophenone. Mar 1939. In German. Analysis No. 334.	1.50
17-19 PB L 70062	2-aminobenzoic acid. Mar 1939. In German. Analysis No. 335.	1.50
20-21 PB L 70062	4-aminobenzoic acid. Mar 1939. In German. Analysis No. 336.	1.50
22-24 PB L 70062	4-chloroaniline-2-sulfonic acid. Mar 1939. In German. Analysis No. 337.	1.50
25-26 PB L 70062	4-chloroaniline-3-sulfonic acid. Mar 1939. In German. I. G. Analysis No. 338.	1.50
27-29 PB L 70062	Aniline hydrochloride. Mar 1939. In German. I. G. Analysis No. 339.	1.50

30-31 PB L 70062 — 2-toluidine hydrochloride. Mar 1939. In German. I. G. Analysis No. 340. — 1.50

32 PB L 70062 — 3-chloro-1-nitrobenzene. Mar 1939. In German. I. G. Analysis No. 341. — 1.50

33 PB L 70062 — 3-chloroaniline. Mar 1939. In German. I. G. Analysis No. 342. — 1.50

34-35 PB L 70062 — 2-chloro-1,4-phenylenediamine. Mar 1939. In German. I. G. Analysis No. 343. — 1.50

36-37 PB L 70062 — m-nitrobenzoic acid. Mar 1939. In German. I. G. Analysis No. 344. — 1.50

38-40 PB L 70062 — m-nitrobenzoyl chloride. Mar 1939. In German. Analysis No. 345. — 1.50

41-42 PB L 70062 — 4-nitrobenzoic acid. Mar 1939. In German. I. G. Analysis No. 346. — 1.50

43-45 PB L 70062 — 4-nitrobenzoyl chloride. Mar 1939. In German. Analysis No. 347. — 1.50

46-47 PB L 70062 — 4-chloro-6-nitro-2-aminophenol. Mar 1939. In German. I. G. Analysis No. 348. — 1.50

48-49 PB L 70062 — 3,4-dichloro-1-nitrobenzene. Mar 1939. In German. I. G. Analysis No. 349. — 1.50

50 PB L 70062 — 3,4-dichloroaniline. Mar 1939. In German. I. G. Analysis No. 350. — 1.50

51 PB L 70062 — 1-amino-6-naphthol. Mar 1939. In German. I. G. Analysis No. 351. — 1.50

52-54 PB L 70062 — Chromium ore. Mar 1939. In German. I. G. Analysis No. 352. — 1.50

55-55a PB L 70062 — Potassium bichromate. Mar 1939. In German. I. G. Analysis No. 353. — 1.50

56-58 PB L 70062 — Calcium fluoride. Mar 1939. In German. I. G. Analysis No. 354. — 1.50

59-62 PB L 70062 — Hydrofluoric acid. Mar 1939. In German. I. G. Analysis No. 355. — 1.50

63-68 PB L 70062 — Sodium fluoride. Mar 1939. In German. Analysis No. 356. — 1.50

69-71 PB L 70062 — Calcium carbide. Mar 1939. In German. Analysis No. 357. — 1.50

72-73 PB L 70062 — Potassium permanganate. Mar 1939. In German. Analysis No. 358. — 1.50

74-86 PB L 70062 — Phosphorite. Mar 1939. In German. I. G. Analysis No. 359. — 1.50

87-89 PB L 70062 — Sulfuryl chloride. Mar 1939. In German. I. G. Analysis No. 360. — 1.50

90-92 PB L 70062 — Thionyl chloride. Mar 1939. In German. I. G. Analysis No. 361. — 1.50

93-97 PB L 70062 — Sulfur. Mar 1939. In German. I. G. Analysis, No. 362. — 1.50

98-108 PB L 70062 — Zinc compounds. Mar 1939. In German. I. G. Analysis No. 363. — 1.50

109-110 PB L 70062 — Sulfur chloride. Mar 1939. In German. I. G. Analysis No. 364. — 1.50

111-119 PB L 70062 — 1,3-butadiene. Mar 1939. In German. I. G. Analysis No. 365. — 1.50

120 PB L 70062 — Sodium methyl sulfate. Mar 1939. In German. I. G. Analysis No. 366. — 1.50

121 PB L 70062 — Sodium ethyl sulfate. Mar 1939. In German. I. G. Analysis No. 367. — 1.50

122 PB L 70062 — Methylamine. Mar 1939. In German. I. G. Analysis No. 368. — 1.50

123-126 PB L 70062 — Sodium acetate. Mar 1939. In German. I. G. Analysis No. 369. — 1.50

127-128 PB L 70062 — Acetaldehyde. Mar 1939. In German. I.G. Analysis. No. 370. — 1.50

129-132 PB L 70062 — Oxalyl chloride. Mar 1939. In German. I. G. Analysis No. 371. — 1.50

133 PB L 70062 — Acetamide. Mar 1939. In German. I. G. Analysis No. 372. — 1.50

134-136 PB L 70062 — Methyl 1,3-toluidine. Mar 1939. In German. Analysis No. 373. — 1.50

137-139 PB L 70062 — 1,4-toluidine. Mar 1939. In German. Analysis No. 374. — 1.50

140-142 PB L 70062 — Ethyl-1,3-toluidine. Mar 1939. In German. I. G. Analysis No. 375. — 1.50

143-145 PB L 70062 — Ethyl-1,4-toluidine. Mar 1939. In German. Analysis No. 376. — 1.50

146-148 PB L 70062 — 3-methyloltoluidine. n.d. In German. I. G. Analysis No. 377. — 1.50

149-151 PB L 70062 — 4-dimethyl-toluidine. Mar 1939. In German. I. G. Analysis No. 378. — 1.50

152-154 PB L 70062 — Analysis of 4-dimethyl-toluidine. n. d. In German. I. G. Analysis No. 379. — 1.50

155-157 PB L 70062 — 4-diethyltoluidine. n. d. In German. I. G. Analysis No. 380. — 1.50

158-160 PB L 70062 — Ethylbenzyl-3-toluidine. n.d. In German. I. G. Analysis No. 381. — 1.50

161-163 PB L 70062 — Ethylbenzyl - 4 - toluidine. Mar 1939. In German. I. G. Analysis No. 382. — 1.50

164-166 PB L 70062 — 4-chloro-2-toluidine. Mar 1939. In German. I. G. Analysis No. 383. — 1.50

167-170 PB L 70062 — 5-chloro-2-toluidine. Mar 1939. In German. I. G. Analysis No. 384. — 1.50

171-172 PB L 70062 — 2-chloro-4-toluidine. Mar 1939. In German. I. G. Analysis No. 385. 1.50

173-174 PB L 70062 — 2-chloro-4-toluidine - 5 - sulfonic acid. Mar 1939. In German. I. G. Analysis No. 386. 1.50

175 PB L 70062 — 2-toluidine - 4 - sulfonic acid. Mar 1939. In German. I. G. Analysis No. 387. 1.50

176-177 PB L 70062 — 2-toluidine-5-sulfonic acid. Mar 1939. In German. I. G. Analysis No. 388. 1.50

178 PB L 70062 — 2,4-dichlorotoluene. Mar 1939. Mar 1939. In German. I. G. Analysis No. 389. 1.50

179 PB L 70062 — 3,4-dichlorotoluene. Mar 1939. In German. I. G. Analysis No. 390 1.50

180 PB L 70062 — 1,2,3-trichlorobenzene. Mar 1939. In German. I. G. Analysis No. 391. 1.50

181 PB L 70062 — 1,2,4-trichlorobenzene. Mar 1939. In German. I. G. Analysis No. 392. 1.50

182-184 PB L 70062 — 1,2-xylene. Mar 1939. In German. I. G. Analysis No. 393. 1.50

185-186 PB L 70062 — Approximative method for the determination of o-xylene. Nov 25, 1939. In German. Addition to I. G. Analysis No. 393. 1.50

187-189 PB L 70062 — 1,3-Xylene. Mar 1939. In German. I. G. Analysis No. 394. 1.50

190-192 PB L 70062 — 1,4-Xylene. Mar 1939. In German. I. G. Analysis No. 395. 1.50

193 PB L 70062 — 2-chloro-1,4-xylene. Mar 1939. In German. I. G. Analysis No. 396. 1.50

194 PB L 70062 — 2,8-dihydroxy-naphthalene-6-sulfonic acid G. Mar 1939. In German. I. G. Analysis No. 397. 1.50

195-200 PB L 70062 — Anthracene. Mar 1939. In German. I. G. Analysis No. 398. 1.50

201-202 PB L 70062 — Anthraquinone. Mar 1939. In German. I. G. Analysis No. 399. 1.50

203-210 PB L 70062 — Carbazole. Mar 1939. In German. I. G. Analysis No. 400. 1.50

211-214 PB L 70062 — Pyridine. Mar 1939. In German. I. G. Analysis, No. 401. 1.50

215 PB L 70062 — 2,4-dihydroxyquinoline. Mar 1939. In German. I. G. Analysis No. 402. 1.50

216 PB L 70062 — 1-phenyl-3-methyl-5-pyrazolone. Mar 1939. In German. I. G. Analysis No. 403. 1.50

217-218 PB L 70062 — Isatin. Mar 1940. In German. I. G. Analysis No. 404. 1.50

219-220 PB L 70062 — 5,7-dichloroisatin. Mar 1939. In German. I. G. Analysis No. 405. 1.50

221-222 PB L 70062 — 5,7-dibromoisatin. Mar 1939. In German. I. G. Analysis No. 406. 1.50

223-226 PB L 70062 — Chloride of lime. Mar 1939. In German. I. G. Analysis No. 407. 1.50

227-229 PB L 70062 — Sodium hypochlorite solution. Mar 1939. In German. I. G. Analysis No. 408. 1.50

230-235 PB L 70062 — Analysis of formic acid and sodium formate Mar 1939. In German. I. G. Analysis No. 409. 1.50

236-238 PB L 70062 — Crotonaldehyde. Mar 1939. In German. I. G. Analysis No. 410. 1.50

239-240 PB L 70062 — Castor oil. Mar 1939. In German. I. G. Analysis No. 411. 1.50

241-243 PB L 70062 — Turkey Red oil. Mar 1939. In German. I. G. Analysis No. 412. 1.50

244-252 PB L 70062 — Simultaneous Analysis of mono-, di-, trimethylamine and ammonia. Mar 1939. In German. I. G. Analysis No. 413/414. 1.50

253-255 PB L 70062 — 4-nitro-2-toluidine. Mar 1939. In German. I. G. Analysis No. 415. 1.50

256-257 PB L 70062 — Diformyl 1,4-phenylenediamine. Mar 1939. In German. I. G. Analysis No. 416. 1.50

258-260 PB L 70062 — Diacetyl-1,4-phenylene diamine. Mar 1939. In German. I. G. Analysis No. 417. 1.50

261 PB L 70062 — 3-and 5-nitro-salicylic acid. Mar 1939. In German. I. G. Analysis No. 418. 1.50

262 PB L 70062 — Diazosalicylic acid. Mar 1939. In German. I. G. Analysis No. 419. 1.50

263-264 PB L 70062 — m-xylidine sulfonic acid. n.d. In German. I. G. Analysis No. 420. 1.50

265-267 PB L 70062 — Pyrogallol carboxylic acid. Mar 1939. In German. I. G. Analysis No. 421. 1.50

268-270 PB L 70062 — 2,4-dinitroacetanilide. Mar 1939. In German. I. G. Analysis No. 422. 1.50

271-272 PB L 70062 — N-benzylaniline. Mar 1939. In German. I. G. Analysis No. 423. 1.50

273-274 PB L 70062 — N-methyl diphenylamine. Mar 1939. In German. I. G. Analysis No. 424. 1.50

275-276 PB L 70062 — 2,5-toluylenediamine. Mar 1939. In German. I. G. Analysis No. 425. 1.50

277-280 PB L 70062 — Phenylhydrazine-2-sulfonic acid. Mar 1939. In German. I. G. Analysis No. 426. 1.50

281-282 PB L 70062 — Pseudo-cumidine. Mar 1939. In German. I. G. Analysis 427. 1.50

283-284 PB L 70062 — 1-acetylamino-8-naphthol-3,6-disulfonic acid. Mar 1939. In German. I. G. Analysis No. 428. 1.50

285-286 PB L 70062 — 1-amino-2-naphtholethyl ether-6-sulfonic acid. Mar 1939. In German. I. G. Analysis No. 429. 1.50

287-288 PB L 70062 — 1-naphthol-3,6,8-trisulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 430.

289-290 PB L 70062 — 2-naphthol-3,6,8trisulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 431.

291-292 PB L 70062 — Primulin sulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 432.

293 PB L 70062 — 3'-aminophenyl-1,2-naphthimidazole-5-hydroxy-7-sulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 433.

294-297 PB L 70062 — Dextrin. Mar 1939. In German. 1.50
I. G. Analysis No. 434.

298-302 PB L 70062 — Potassium carbonate. Mar 1939. In German. 1.50
I. G. Analysis No. 435.

303-306 PB L 70062 — Potassium hydroxide. Mar 1939. In German. 1.50
I. G. Analysis No. 436.

307-309 PB L 70062 — Alkali chloride. Mar 1939. In German. 1.50
I. G. Analysis No. 437.

310-313 PB L 70062 — Potassium chlorate. Mar 1939. In German. 1.50
I. G. Analysis No. 438.

314-315 PB L 70062 — Sodium chlorate. Mar 1939. In German. 1.50
I. G. Analysis No. 439.

316-319 PB L 70062 — Sodium phosphorustungsten-molybdenate. Mar 1939. In German. 1.50
I. G. Analysis No. 440.

320-322 PB L 70062 — Phosgene. Mar 1939. In German. 1.50
I. G. Analysis No. 441.

323-325 PB L 70062 — Sodium amide. Mar 1939. In German. 1.50
I. G. Analysis No. 442.

326-329 PB L 70062 — Ethylene oxide. Mar 1939. In German. 1.50
I. G. Analysis No. 443.

330-331 PB L 70062 — Mono-formyl-1,3-phenylenediamine. Mar 1939. In German. 1.50
I. G. Analysis No. 444.

332-333 PB L 70062 — Diformyl-1,3-phenylene diamine. Mar 1940. In German. 1.50
I. G. Analysis No. 445.

334-335 PB L 70062 — 4-nitroanisol. Mar 1939. In German. 1.50
I. G. Analysis No. 446.

336-337 PB L 70062 — 4-anisidine. Mar 1939. In German. 1.50
I. G. Analysis No. 447.

338-339 PB L 70062 — Sodium benzenesulfonate. Mar 1939. In German. 1.50
I. G. Analysis No. 448.

340-343 PB L 70062 — Sodium benzene-1,3-disulfonate. Mar 1939. In German. 1.50
I. G. Analysis No. 449.

344-345 PB L 70062 — Benzonitrile. Mar 1939. In German. 1.50
I. G. Analysis No. 450.

346-347 PB L 70062 — Benzene sulfochloride. Mar 1939. In German. 1.50
I. G. Analysis No. 451.

348-349 PB L 70062 — (Mono) benzylaniline-4-sulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 452.

350-351 PB L 70062 — Salicylic acid methyl ester. n.d. In German. 1.50
I. G. Analysis No. 453.

352-353 PB L 70062 — 1,4-phenylene diamine-2-sulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 454.

354-355 PB L 70062 — Cyclohexylamine. Mar 1939. In German. 1.50
I. G. Analysis No. 455.

356-357 PB L 70062 — 8,1-chloro naphthylamine. n.d. In German. 1.50
I. G. Analysis No. 456.

358 PB L 70062 — 2,(3'nitrobenzoylamino)-5-naphthol-7-sulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 457.

359 PB L 70062 — 2(4'-nitrobenzoylamino)-5-naphthol-1-sulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 458.

360-361 PB L 70062 — 3'-aminobenzoyl-2-amino-5-naphthol-1-sulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 459.
Analysis 460 missing.

362-363 PB L 70062 — 1-benzoylamino-8-naphthol-4,6-disulfonic acid. Mar 1939. In German. 1.50
I. G. Analysis No. 461.

364-366 PB L 70062 — 4'-sulfo-1-phenyl-3-methyl-5-pyrazolone. n.d. In German. 1.50
I. G. Analysis No. 462.

367-369 PB L 70062 — Naphtenic acids. Mar 1939. In German. 1.50
I. G. Analysis No. 463.

370-374 PB L 70062 — 4-bromo-1-amino-anthraquinone-2-sulfonic acid. Bromaminsäure (=Bromamine Acid). Mar 1939. In German. 1.50
I. G. Analysis No. 464.

375-382 PB L 70062 — Chlorine gas. Mar 1939. In German. 1.50
I. G. Analysis No. 465.

383 PB L 70062 — Determination of water in chlorine gas. Nov 24, 1941. In German. 1.50
Addition to I. G. Analysis No. 465.

384-387 PB L 70062 — Phosphorus. Mar 1939. In German. 1.50
I. G. Analysis No. 466.

388-390 PB L 70062 — Phosphorus oxychloride. Mar 1939. In German. 1.50
I. G. Analysis No. 467.

390a-391 PB L 70062 — Phosphorus pentachloride. Mar 1939. In German. 1.50
I. G. Analysis No. 468.

392-397 PB L 70062 — Phosphoric acid. Mar 1939. In German. 1.50
I. G. Analysis No. 469.

398-402 PB L 70062 — Cadmium sludge. Mar 1939. In German. 1.50
I. G. Analysis No. 470.

403-406 PB L 70062 — Sodium nitrite. Mar 1939. In German. 1.50
I. G. Analysis No. 471.

407-417 PB L 70062 — Sodium fluoride and cryolite. Mar 1939. In German. 1.50
I. G. Analysis No 472.

418-421 PB L 70062 — Carbon disulfide. Mar 1939. In German. 1.50
I. G. Analysis No. 473

422-423 PB L 70062 — 5-nitro-2-toluidine. Mar 1939. In German. I. G. Analysis No. 474. 1.50

424-425 PB L 70062 — 3-nitro-4-anisidine. Mar 1939. In German. I. G. Analysis No. 475. 1.50

426-427 PB L 70062 — 2-anisidine-4-sulfonic acid. Mar 1939. In German. I. G. Analysis No. 476. 1.50

428-429 PB L 70062 — Acetoacetic anilide. Mar 1939. In German. I. G. Analysis No. 477. 1.50

430-431 PB L 70062 — Acetoacetic acid -2-toluidine. Mar 1939. In German. I. G. Analysis No. 478. 1.50

432-433 PB L 70062 — Acetoacetic acid-2-anisidide. Mar 1939. In German. I. G. Analysis No. 479. 1.50

434-437 PB L 70062 — 2-chlorobenzoic acid. Mar 1939. In German. I. G. Analysis No. 480. 1.50

438-440 PB L 70062 — 2-toluenesulfamide. 1941. In German. I. G. Analysis No. 481. 1.50

441-445 PB L 70062 — Determination of -4-toluenesulfamide. Jul 1941. In German. I. G. Analysis No. 482. 1.50

446-447 PB L 70062 — Benzotrichloride. Oct 1941. In German. I. G. Analysis No. 483. 1.50

448-449 PB L 70062 — 3,5-dinitro-2-cresol. Oct 1941. In German. I. G. Analysis No. 484. 1.50

450-452 PB L 70062 — 1,4-naphthoquinone. Sept 1941. In German. I. G. Analysis No. 485. 1.50

453-454 PB L 70062 — 1,8-sultone. Sep 1941. In German. I. G. Analysis No. 486. 1.50

455 PB L 70062 — N-propyl alcohol. Sep 1941. In German. I. G. Analysis No. 487. 1.50

456-457 PB L 70062 — Isobutyl alcohol. 1941. In German. I. G. Analysis No. 488. 1.50

458 PB L 70062 — N-propyl chloride. 1941. In German. I. G. Analysis No. 489. 1.50

459 PB L 70062 — N-butylchloride. 1941. In German. I. G. Analysis No. 490. 1.50

460 PB L 70062 — Tertiary butyl chloride. 1941. In German. I. G. Analysis No. 491. 1.50

461-462 PB L 70062 — Diphenylamine-4-sulfonic acid. Mar 1941. In German. I. G. Analysis No. 492. 1.50

463-464 PB L 70062 — 4-toluenesulfonic acid methyl ester. 1941. In German. I. G. Analysis No. 493. 1.50

465-466 PB L 70062 — 4-toluenesulfonic acid ethyl ester. Jul 1941. In German. I. G. Analysis No. 494. 1.50

467-470 PB L 70062 — 4-chlorobenzoic acid. n.d. In German. I. G. Analysis No. 495. 1.50

471 PB L 70062 — 3-acetamino-4-cresol. 1941. In German. I. G. Analysis No. 496. 1.50

472-473 PB L 70062 — 4-acetaminophenol. 1941. In German. I. G. Analysis No. 497. 1.50

474 PB L 70062 — 1,2-dihydroxybenzene monoethylester. Mar 1939. In German. I. G. Analysis No. 498. 1.50

475-476 PB L 70062 — 2-amino-5-benzoylamino-1,4-dimethoxy-benzene. 1941. In German. I. G. Analysis No. 499. 1.50

477-478 PB L 70062 — 2-amino-5-benzoylamino-1,4-diethoxy-benzene. Mar 1941. In German. I. G. Analysis No. 500. 1.50

479-480 PB L 70062 — Dichlorophthalic acid. n.d. In German. I. G. Analysis No. 501 1.50

481 PB L 70062 — Tetrachlorophthalic acid. May 9, 1930. In German. I. G. Analysis No. 502. 1.50

482-483 PB L 70062 — 1-amino-8-naphthol-5-sulfonic acid. Mar 9, 1930. In German. I. G. Analysis No. 503. 1.50

484 PB L 70062 — Ethylcarbazole. May 9, 1930. In German. I. G. Analysis No. 504. 1.50

485-487 PB L 70062 — Leuco-1,4-diaminoanthraquinone. May 5, 1933. In German. I. G. Analysis No. 506. 1.50

488-489 PB L 70062 — 4'4''-diamino-2'2''-5'5''-tetramethyltriphenylmethane. May 5, 1933. In German. I. G. Analysis No. 506. 1.50

490-491 PB L 70062 — 4'4''-diamino-2'2''-5'5''-tetramethyl--2-chlorotriphenylmethane. May 5, 1933. In German. I. G. Analysis No. 507. 1.50

492 PB L 70062 — 4'4''-diamino-3'3''-dimethoxy triphenylmethane. May 5, 1933. In German. I. G. Analysis No. 508. 1.50

493-496 PB L 70062 — Ethanolamine. May 5, 1933. In German. I. G. Analysis No. 509. 1.50

497-499 PB L 70062 — Aldol. May 1934. In German. I. G. Analysis No. 510. 1.50

500-501 PB L 70062 — Aminosulfonic acid. May 1934. In German. I. G. Analysis No. 511. 1.50

502-506 PB L 70062 — 1-aminoanthraquinone. May 1934. In German. I. G. Analysis No. 512. 1.50

507-508 PB L 70062 — 3-amino-4-cresol-5-sulfonic acid. May 1934. In German. I. G. Analysis No. 513. 1.50

509-510 PB L 70062 — Ethylenechlorohydrin. May 1934. In German. I. G. Analysis No. 514. 1.50

511-512 PB L 70062 — 2-chloroaniline-5-sulfonic acid. May 1934. In German. I. G. Analysis No. 515. 1.50

513-515 PB L 70062 — 1-chloroanthraquinone. May 1934. In German. I. G. Analysis No. 516. 1.50

516 PB L 70062 — Diethyl-3-aminophenol. May 1934. In German. I. G. Analysis No. 517. 1.50

517-519 PB L 70062 — Diethyl-3-phenetidine. May 1934. In German. I. G. Analysis No. 518. 1.50

520-521 PB L 70062 — 2-chloro-1,3-phenylene diamine-5-sulfonic acid. May 1934. In German. Analysis No. 519. 1.50

522-524 PB L 70062 — 1,4-diaminoanthraquinone. May 1934. In German. Analysis No. 520. 1.50

525-526 PB L 70062 — 1,5-diaminoanthraquinone. May 1934. In German. Analysis No. 521. 1.50

527-529 PB L 70062 — 1,5-dichloroanthraquinone. May 1939. In German. I. G. Analysis No. 522. 1.50

530-534 PB L 70062 — Iso-phthalic acid. May 1934. In German. I. G. Analysis No. 523. 1.50

535-539 PB L 70062 — Glycocol. May 1934. In German. I. G. Analysis No. 524. 1.50

540-541 PB L 70062 — Methylacetanilide. May 1934. In German. I. G. Analysis No. 525. 1.50

542-544 PB L 70062 — 1,2-naphthylenediamine-5-sulfonic acid. May 1934. In German. I. G. Analysis No. 526. 1.50

545-546 PB L 70062 — Dehydrothioxylidine. May 1934. In German. I. G. Analysis No. 527. 1.50

547-548 PB L 70062 — 4-toluidine-2-sulfamide. Mar 5, In German. I. G. Analysis No. 528. 1.50

549-550 PB L 70062 — Pyrocatechol. Nov 1934. In German. I. G. Analysis No. 529. 1.50

551-553 PB L 70062 — 4-chlorobenzaldehyde. In German. I. G. Analysis No. 530. 1.50

554-555 PB L 70062 — 4-chlorobenzotrichloride. Nov 1934. In German. I. G. Analysis No. 531. 1.50

556 PB L 70062 — Diphenyl. Nov 1934. In German. I. G. Analysis No. 532. 1.50

557-558 PB L 70062 — 4'-amino-2-methoxydiphenylamine-2'-sulfonic acid. Nov 1934. In German. I. G. Analysis No. 533. 1.50

559-560 PB L 70062 — 3-hydroxydiphenylamine. Nov 1934. In German. I. G. Analysis No. 534. 1.50

561-563 PB L 70062 — Sarcosine. Nov. 1934. In German. I. G. Analysis No. 535. 1.50

564-565 PB L 70062 — Isopropyl alcohol. Nov. 1934. In German. I. G. Analysis No. 536. 1.50

566-567 PB L 70062 — 4-phenetidine-3-sulfonic acid. Nov 1934. In German. I. G. Analysis No. 537. 1.50

568-569 PB L 70062 — 1,4,5,6-tetrachloroanthraquinone. Nov. 1934. In German. I. G. Analysis No. 538. 1.50

570-574 PB L 70062 — 2-aminoanthraquinone. Nov. 1934. In German. I. G. Analysis No. 539. 1.50

575-576 PB L 70062 — Diphenylene oxide. May 1935. In German. I. G. Analysis No. 540. 1.50

577-578 PB L 70062 — 4-methylbenzophenone-2'-carboxylic acid. May 1935. In German. I. G. Analysis No. 541. 1.50

579-580 PB L 70062 — Chlorotoluylbenzoic acid. May 1935. In German. I. G. Analysis No. 542. 1.50

581-583 PB L 70062 — 6'-sulfo-1-naphthyl-5-pyrazolone. May 1935. In German. I. G. Analysis No. 543. 1.50

584 PB L 70062 — Acrylonitrile. May 1935. In German. Analysis No. 544. 1.50

585-594 PB L 70062 — Mercury in urine. Nov 1935. In German. Analysis No. 545. 1.50

595-597 PB L 70062 — 4,4'-dihydroxydiphenyl-sulfone. Nov 1935. In German. I. G. Analysis No. 546. 1.50

598-601 PB L 70062 — Cyclohexanol. Nov 1935. In German. I. G. Analysis No. 547. 1.50

602-608 PB L 70062 — 1,2-dihydroxy anthraquinone. May 1936. In German. I. G. Analysis No. 548. 1.50

609-612 PB L 70062 — 6-ethoxy-2-aminobenzothiazole. Jun 1936. In German. I. G. Analysis No. 549. 1.50

613-614 PB L 70062 — Phenylhydrazine. May 1936. In German. I. G. Analysis No. 550. 1.50

615-616 PB L 70062 — (mono)-oxalyl-1,4-phenylenediamine. May 1936. In German. I. G. Analysis No. 551. 1.50

617-618 PB L 70062 — 4-hydroxy benzoic acid. May 1936. In German. I. G. Analysis No. 552. 1.50

619-620 PB L 70062 — 1-amino-7-naphthol. May 1936. In German. I. G. Analysis No. 553. 1.50

621-622 PB L 70062 — Dicyclohexylamine. May 1936. In German. I. G. Analysis No. 554. 1.50

623-624 PB L 70062 — Octodecyl alcohol. May 1936. In German. I. G. Analysis No. 555. 1.50

625-627 PB L 70062 — Isobutyl-sym-xylidine. May 1936. In German. I. G. Analysis No. 556. 1.50

628-629 PB L 70062 — Toluene-4-carboxylic acid. Nov. 1936. In German. I. G. Analysis No. 557. 1.50

630-635 PB L 70062 — "Nekal" (sodium alkyl naphthalene sulfonate). Sep 1941. In German. I. G. Analysis No. 558. 1.50

636-637 PB L 70062 — Sodium oleyl isethionate. Igepon A. Nov 1936. In German. I. G. Analysis No. 559. 1.50

638-642 PB L 70062 — Sodium oleyl methyltaurine. (Igepon T). Nov 1936. In German. I. G. Analysis No. 560. 1.50

643 PB L 70062 — Cyclohexylphenol. Nov 1936. In German. I. G. Analysis No. 561. 1.50

644-674 PB L 70062 — 2-naphthol-3-carboxylic acid derivatives. (Naphthol AS and analogs. May 1937. In German. I. G. Analysis No. 562. 1.50

676-677 PB L 70062 — 1-chloronaphthalene-8-sulfonic acid. May 1937. In German. I. G. Analysis No. 563. — 1.50

678-679 PB L 70062 — 1-chloronaphthalene-8-thioglycolic acid. May 1937. In German. I. G. Analysis No. 564. — 1.50

680-682 PB L 70062 — Alpha-isatin anilide. May 1937. In German. I. G. Analysis No. 565. — 1.50

683-685 PB L 70062 — Stearamide. May 1937. In German. I. G. Analysis No. 566. — 1.50

686-689 PB L 70062 — Anthraquinone-1-sulfonic acid. May 1937. In German. I. G. Analysis No. 567. — 1.50

690-693 PB L 70062 — Anthraquinone-2-sulfonic acid. May 1937. In German. I. G. Analysis No. 568. — 1.50

694-696 PB L 70062 — 1,4-dihydroxyanthraquinone. May 1937. In German. I. G. Analysis No. 569. — 1.50

697-698 PB L 70062 — 4-3'-5' trichloroanthraquinone-2,1 (N)1'-2'-benzacridone. May 1937. In German. I. G. Analysis No. 570. — 1.50

699-700 PB L 70062 — 1,1'-dianthraquinonylamine. May 1937. In German. I. G. Analysis No. 571. — 1.50

701-727 PB L 70062 — Refined steel. Nov 1937. In German. I. G. Analysis No. 572. — 3.00

728-732 PB L 70062 — Methyltaurine. Nov 1937. In German. I. G. Analysis No. 573. — 1.50

733-734 PB L 70062 — 1-aminoanthraquinone-2-carboxylic acid. Nov 1937. In German. I. G. Analysis No. 574. — 1.50

735-736 PB L 70062 — 2,6-dihydroxyanthraquinone. Nov 1937. In German. I. G. Analysis No. 575. — 1.50

737-739 PB L 70062 — Methane sulfochloride. Nov 1937. In German. I. G. Analysis No. 576. — 1.50

740-742 PB L 70062 — 3,5-dinitrobenzene-1-carboxylic acid. Nov 1937. In German. I. G. Analysis No. 577. — 1.50

743-744 PB L 70062 — 1,3-dihydroxybenzene-4-carboxylic acid. Nov 1937. In German. I. G. Analysis No. 578. — 1.50

745-747 PB L 70062 — 2-chloroanthraquinone. Nov 1937. In German. I. G. Analysis No. 579. — 1.50

748-749 PB L 70062 — 1,4-di-(oxethylamino)-5,8-dihydroxy-anthraquinone. Nov 1937. In German. I. G. Analysis No. 580. — 1.50

750-752 PB L 70062 — Perylene-3,4,9,10-tetra carboxylic anhydride. Nov 1937. In German. I. G. Analysis No. 581. — 1.50

753-756 PB L 70062 — Beta-phenylethyl alcohol. Nov 1937. In German. I. G. Analysis No. 582. — 1.50

757-759 PB L 70062 — 4,4'-3,3'-dimethylidiphenyl-cyclohexane. Mar 1938. In German. I. G. Analysis No. 583. — 1.50

760-761 PB L 70062 — 5-chloro-2-toluidine-3-sulfonic acid. Mar 1938. In German. I. G. Analysis No. 584. — 1.50

762-777 PB L 70062 — Oxethylarylamines. Sep 1938. In German. I. G. Analysis No. 585-596. — 2.00

778-779 PB L 70062 — 1-amino-4-methylaminoanthraquinone-2-sulfonic acid. Mar 1938. In German. I. G. Analysis No. 596. — 1.50

780-781 PB L 70062 — 1,4-dichloroanthraquinone-6-sulfonic acid. Mar 1938. In German. I. G. Analysis No. 597. — 1.50

782-783 PB L 70062 — Para-formaldehyde. Mar 1938. In German. I. G. Analysis No. 598. — 1.50

784-785 PB L 70062 — Phenyl isocyanate. Mar 1938. In German. I. G. Analysis No. 599. — 1.50

786-788 PB L 70062 — Salicylaldehyde. Mar 1938. In German. I. G. Analysis No. 600. — 1.50

789-792 PB L 70062 — Sodium bisulfate. Sep 1938. In German. I. G. Analysis No. 601. — 1.50

793-795 PB L 70062 — 1,3,3-trimethylindoline-2-methylene-omega-aldehyde. Mar 1939. In German. I. G. Analysis No. 602. — 1.50

796-797 PB L 70062 — 1,5-aminonaphthol-7-sulfonic acid. Mar 1939. In German. I. G. Analysis No. 603. — 1.50

798-801 PB L 70062 — 1,7-dihydroxy-naphthalene. Mar 1939. In German. I. G. Analysis No. 604. — 1.50

802-811 PB L 70062 — Nigrosines. Mar 1939. In German. Analysis No. 605. — 1.50

812-823 PB L 70062 — Phenol oil. Mar 1939. In German. I. G. Analysis No. 606. — 1.50

824-825 PB L 70062 — 1,3-butyleneglycol. Dec 1939. In German. I. G. Analysis No. 607. — 1.50

826-827 PB L 70062 — Maleic anhydride. Dec 1939. In German. I. G. Analysis No. 608. — 1.50

828-829 PB L 70062 — Benzene sulfamide. Dec 1939. In German. I. G. Analysis No. 609. — 1.50

830-831 PB L 70062 — 3-nitrobenzene sulfochloride. Dec 1939. In German. I. G. Analysis No. 610. — 1.50

832-834 PB L 70062 — Anthraquinone-2,6-disulfonic acid. Dec 1939. In German. I. G. Analysis No. 611. — 1.50

835-838 PB L 70062 — Anthraquinone-2,7-disulfonic acid. Dec 1939. In German. I. G. Analysis No. 612. — 1.50

839-840 PB L 70062 — Dibromoanthrone. Dec 1939. In German. I. G. Analysis No. 613. — 1.50

841-843 PB L 70062 — Sodium cyanide. Oct 1940. In German. I. G. Analysis No. 614. — 1.50

844-848 PB L 70062 — Diisobutylene. Oct 1940. In German. I. G. Analysis No. 615. — 1.50

849-851 PB L 70062 — Ethylene diamine. Oct 1940. In German. I. G. Analysis No. 616. — 1.50

852-854 PB L 70062 — Piperidine. Oct 1940. In German. I. G. Analysis No. 617. 1.50

855 PB L 70062 — Alpha-chloronaphthalene. Oct 1940. In German. I. G. Analysis No. 618. 1.50

856-857 PB L 70062 — 2-naphthalene-sulfochloride. Oct 29, 1940. In German. I. G. Analysis No. 619. 1.50

858-859 PB L 70062 — 3,6-diamino-2,7-dimethylhydroacridine. Oct 1940. In German. I. G. Analysis No. 620. 1.50

860 PB L 70062 — o-aminosulfosalicylic acid. Mar 1941. In German. I. G. Analysis No. 621. 1.50

861-862 PB L 70062 — 2-butyltoluidine. Mar 1931. In German. I. G. Analysis No. 622. 1.50

863 PB L 70062 — Phenylenediamine. Mar 1941. In German. Analysis No. 623. 1.50

864-866 PB L 70062 — Dimethylether. Mar 1941. In German. I. G. Analysis No. 624. 1.50

867-882 PB L 70062 — "Mersol." (sulfochlorinated paraffin-hydrocarbons). Mar 1941. In German. I. G. Analysis No. 625-626 1.50

883-885 PB L 70062 — Nitrosyl sulfuric acid. Mar 1941. In German. I. G. Analysis No. 627. 1.50

886-890 PB L 70062 — Aluminum chloride. Oct 1941. In German. I. G. Analysis No. 628. 1.50

891 PB L 70062 — Hydrazine sulfate. Oct 1941. In German. I. G. Analysis No. 629. 1.50

892 PB L 70062 — Vinyl chloride. Oct 1941. In German. I. G. Analysis No. 630. 1.50

PB L 70062-S. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel G-22, Frames 1-892, abstract cards). 1930-1944. 291 p. Price: Microfilm-$6.00 - Photostat-$20.00.
Brief abstracts of the individual items on the above FIAT microfilm reel, G-22, PB 70062, prepared by FIAT personnel in Germany.

PB L 70190. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel G-39, Frames 7321-7898). 1941-1943. 577 f. Price: Microfilm-$6.00 - Enlargement print-$58.00
This microfilm reel was prepared by FIAT personnel in Germany. The reel contains analysis procedures numbered from 500 to 622, inclusive. (See also FIAT microfilm reels G-37, PB 70188; G-38, PB 70189; and G-22, PB 70062, above, for analysis procedures from 1-194, and 195-500. Individual items are listed below and will be available as enlargement prints only. The entire reel may be obtained as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
7321-7820 PB L 70190	Analysis procedures No. 500 to 630. These frames were also treated on Reel G 22, Frames 500-630.	$50.00
7821-7822 PB L 70190	Quantitative analysis of butyraldehyde. Oct 1941. In German. Analysis No. 631.	1.50
7823 PB L 70190	Quantitative analysis of hexamethylenediamine. Oct 1941. In German. Analysis No. 632.	1.50
7824 PB L 70190	Quantitative analysis of trimethylolpropane. Oct 1941. In German. Analysis No. 633.	1.50
7825-7828 PB L 70190	Quantitative analysis of ethyl benzene. Oct 1941. In German. Analysis No. 634.	1.50
7829 PB L 70190	Quantitative analysis of hydroxynaphthalene-4,8-disulfonic acid. Mar 1942. In German. Analysis No. 635.	1.50
7830 PB L 70190	Quantitative analysis of 1 (2'-sulfophenyl)-3-phenyl-5-pyrazolone. Oct 1941. In German. Analysis No. 636.	1.50
7831 PB L 70190	Qualitative analysis of 2-amino-1-hydroxybenzene-4-sulfamide. Mar 1942. In German. Analysis No. 637.	1.50
7832 PB L 70190	Quantitative analysis of 6-chloro-2-aminohydroxybenzene-4-sulfonic acid. Mar 1942. In German. Analysis No. 638.	1.50
7833-7834 PB L 70190	Quantitative analysis of 2-amino-5-chlorobenzoic acid. Oct 1941. In German. Analysis No. 639.	1.50
7835-7841 PB L 70190	Methods for the determination of phenol in waste waters. Mar 1942. In German. Analysis No. 640.	1.50
7842-7844 PB L 70190	Analysis of ammonium bicarbonate. Mar 1942. In German. Analysis No. 641.	1.50
7845-7849 PB L 70190	Analysis of urea. Mar 1942. In German. Analysis No. 642.	1.50
7850 PB L 70190	Analysis of acetonitrile. Mar 1942. In German. Analysis No. 643.	1.50
7851 PB L 70190	Analysis of methyldiethanolamine. Mar 1942. In German. Analysis No. 644.	1.50
7852 PB L 70190	Analysis of diethylethanolamine. Mar 1942. In German. Analysis No. 645.	1.50
7853-7860 PB L 70190	Analysis of styrene. Mar 1942. In German. Analysis No. 646.	1.50
7861-7862 PB L 70190	Analysis of tricresylphosphate. Mar 1942. In German. Analysis No. 647.	1.50
7863 PB L 70190	Analysis of dibutylphthalate (=palatinol C). Mar 1942. In German. Analysis No. 648.	1.50
7864 PB L 70190	Analysis of 4,4'-diamino-3,3'-dimethyldiphenyl-6,6'-disulfonic acid. Mar 1942. In German. Analysis No. 649	1.50
7865-7868 PB L 70190	Analysis of trifluoromethyl-m-bensoyl fluoride. Mar 1942. In German. Analysis No. 650.	1.50
7869-7871 PB L 70190	Analysis of 1-amino-2-methylanthraquinone. Mar 1942. In German. Analysis No. 651. Analysis 652 missing.	1.50
7872-7875 PB L 70190	Analysis of 1,4-butanediol. Oct 16, 1942. In German. Analysis No. 653. Analysis 654 missing.	1.50

Analytical Chemistry (contd)

7876-7878 PB L 70190 — Analysis of ammonium chloride. Oct 1942. In German. 1.50
Analysis No. 655.
Analysis 656 missing.

7879-7886 PB L 70190 — Analysis of olefines. Mar 1943. In German. 1.50
Analysis No. 657

7887-7891 PB L 70190 — Methods for the determination of carbonyl groups in aldehydes and ketones. Mar 1943. In German. 1.50
Analysis No. 658.
Analysis No. 659 missing.

7892-7893 PB L 70190 — Analysis of 2,4-dichlorobenzoic acid. Mar 1943. In German. 1.50
Analysis No. 660.

7894 PB L 70190 — Analysis of 4,4'-dichlorobenzophenone chloride (= 4,4'-dichlorodiphenyl-dichloromethane. Mar 1943. In German. 1.50
Analysis No. 661.

7895-7898 PB L 70190 — Analysis of hydroxylamine-sulfate and -chloride. Mar 19, 1943. In German. 1.50
Analysis No. 662.

PB L 70190-S. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Analytical procedures. (FIAT Microfilm Reel O-39, Frames 7321-7898, abstract cards). 1941-1943. 37 p. Price: Microfilm-$1.00 - Photostat-$3.00
Brief abstracts of the individual items on the above FIAT microfilm reel, O-39, PB L 70190, prepared by FIAT personnel in Germany. (For abstract cards of the individual procedures from 500 to 630, see FIAT reel O-22, PB L 70062, above, in which those procedures also occur).

PB L 73503. I.G. FARBENINDUSTRIE A.G., LUDWIGSHAFEN, GERMANY. Reports of analyses from various laboratories. (FIAT Microfilm Reel G 28, Frames 3621-5275). 1926-1942. 827f. Price: Microfilm -$6.00 - Enlargement print -$83.00
This microfilm reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints. The entire reel may be obtained as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. A few of the reports on this reel may not reproduce well. In German, except when otherwise noted.

Frames	Title	Price
3621-3624 PB L 73503	Detection of aluminum in sodium chloride solutions. n.d. In German.	$1.50
3625-3632 PB L 73503	Detection of silicic acid in rock salt brine and its influence on the working of the mercury cell. By Buettgenbach. Sep 17, 1937. In German.	1.50
3633-3635 PB L 73503	Boiling and condensation curve of ethanol, butanol and ethanolbutyric aldehyde. n.d. In German.	1.50
3636-3644 PB L 73503	Flash-point determination of solvents and lacquers. By Rossmann and Haug. n.d. In German.	1.50
3645-3648 PB L 73503	Explosion during the determination of mercury in urine. Sep 28, 1937. In German.	1.50
3649-3654 PB L 73503	Detection of magnesium in the presence of calcium in rock salt brines. By Buettgenbach. Nov 10, 1937. In German.	1.50
3655-3657 PB L 73503	Colorimetric determination of aluminum in steel. By Ehrhardt. Nov 27, 1937. In German.	1.50
3658-3662 PB L 73503	Calcium - complex slat of "Trilon B". By Ender. Nov 25, 1937. In German.	1.50
3663-3679 PB L 73503	Improvements in visual conductometry. By O. Pfundt. Nov 19, 1937. In German.	2.00
3680-3686 PB L 73503	Determination of butadiene in gases according to the maleic anhydride method. By Wetsel. Dec 9, 1937. In German.	1.50
3687-3695 PB L 73503	Properties of stoneware containers for acids. By Eitner. Oct 9, 1937. In German.	1.50
3696-3698 PB L 73503	Micro-analytic determination of oxygen in organic substances. By Zinnecke-Bernhardt. Nov 22, 1937. In German.	1.50
3699-3702 PB L 73503	Experiences with the micro-methoxyl-method. By Zinnecke. n.d. In German.	1.50
3703-3716 PB L 73503	Determining the rendement of single fibers according to Prof. Grassmann. By Muench and Zimmermann. Jan 3, 1938. In German.	1.50
3717-3719 PB L 73503	1,4-Dichloroanthraquinone-6-sulfonic acid. By Kuppe. May 15, 1937. In German.	1.50
3720-3726 PB L 73503	Rapid determination of zinc in zinc-amalgam. By Hohn. Dec 30, 1937. In German.	1.50
3727-3729 PB L 73503	Quantitative determination of tungsten in steels by emission-spectral-analysis. By Mayrhofer. Dec 22, 1937. In German.	1.50
3730-3737 PB L 73503	Determination of aluminum in alloys by the hydroxyquinoline method. By Riebeth. Feb 14, 1930. In German.	1.50
3738-3740 PB L 73503	Determination of ortho, meta and pyrophosphate. By Hailigers. Feb 14, 1938. In German.	1.50
3741-3758 PB L 73503	Quantitative determination of ethylene oxide. By Metzger. Jan 31, 1938. In German.	2.00
3759-3763 PB L 73503	Molecular weight of the alpha-polyoxymethylenes. By Bandel. Mar 2, 1938. In German.	1.50
3764-3766 PB L 73503	Acidimetric titrations in water-free acetic acid as solvent. Mar 17, 1938. In German.	1.50
3767-3769 PB L 73503	Destruction of the organic substance for determining mercury in urine. By Schalte. Mar 3, 1938. In German.	1.50
3770-3772 PB L 73503	Synthetic tanning on the basis of lignin sulfonic acid. By Hiltner. Mar 19, 1937. In German.	1.50
3773-3779 PB L 73503	Quantitative determination of the tanning power of "Tanigan extra A and B". By Hiltner. Sep 28, 1937. In German.	1.50
3780-3790 PB L 73503	Determination of zinc in aluminum bronzes by means of emission-spectral analysis. By Mayrhofer. Mar 10, 1938. In German.	1.50
3791-3795 PB L 73503	Apparatus for continuous sampling of liquids. By Pieper. May 6, 1938. In German.	1.50
3796-3810 PB L 73503	Analysis of soap fatty acid. By Luther and Wietzel. Feb 8, 1938. In German.	1.50
3811-3813 PB L 73503	Quantitative determination of indole. By Arnim. May 14, 1938. In German.	1.50
3814-3819 PB L 73503	Testing of "Vulkacit TR". By Krüger. Nov 8, 1937. In German.	1.50

3820-3825 PB L 73503 — Solid absorbent for hydrogen sulfide in presence of carbon dioxide. By Wetzel. Oct 27, 1937. In German. 1.50

3826-3840 PB L 73503 — Chemical analysis of organic plastics and raw material for lacquers. By Bandel. May 10, 1938. In German. 1.50

3841-3847 PB L 73503 — Apparatus for automatic micro-determination of nitrogen. By Grassner. Jun 3, 1938. In German. 1.50

3848-3852 PB L 73503 — Micro-determination of mercury in difficultly combustible substances. By Heinemann. May 1938. In German. 1.50

3853-3862 PB L 73503 — Testing of technical phenol oils. Sep 20, 1938. In German. 1.50

3863-3865 PB L 73503 — Behavior of aromatic bases with nitro groups in the ortho position. Sep 19, 1938. In German. 1.50

3866-3868 PB L 73503 — Testing polyvinyl acetate products. Sep 21, 1938. In German. 1.50

3869-3883 PB L 73503 — Analysis of sulfonated naphthalene. By Grundmann. Apr 2, 1938. In German. 1.50

3884-3893 PB L 73503 — Determination of traces of organically bound chlorine. Nov 10, 1938. In German. 1.50

3894-3902 PB L 73503 — Surface active substances from paraffinic hydrocarbons. By Smeykal and Asinger. Nov 1938. In German. 1.50

3903-3909 PB L 73503 — Oppau distilling tube. By Stern. Oct 16, 1935, Apr 22, 1936, Apr 28, 1937. In German. 1.50

3910-3919 PB L 73503 — Formation of butinediol. By Hecht and J. Schmidt. Dec 21, 1938. In German. 1.50

3920-3924 PB L 73503 — Detection and determination of 1-naphthol in 2-naphthol. By Meyer II. Dec 29, 1938. In German. 1.50

3925-3927 PB L 73503 — Determination of 2-naphthol in presence of sulfite and 2-naphthalene sulfonic acid. By Meyer II. Dec 28, 1938. In German. 1.50

3928-3941 PB L 73503 — Detection of traces of nickel carbonyl in the air. By Graessner. Jan 4, 1939. In German. 1.50

3942 PB L 73503 — Calcium chloride in the Sandmeyer reaction. Jan 21, 1939. In German. 1.50

3943-3944 PB L 73503 — I-acid imide. Jan 21, 1939. In German. 1.50

3945-3952 PB L 73503 — Spectrographic determination of alkali in ashes. By Mayrhofer. Dec 17, 1938. In German. 1.50

3953-3957 PB L 73503 — Volumetric determination of butadiene by bromination. By van Hulle. Jan 11, 1939. In German. 1.50

3958-3965 PB L 73503 — Ketone from isobutyl oil-fraction. By Jochheim. Sep 29, 1926. In German. 1.50

3966-3971 PB L 73503 — Reaction of chromotropic acid. By Steudemann. Jul 16, 1938. In German. 1.50

3972-3984 PB L 73503 — The iron content in technical formamide. By Günther. Mar 8, 1939. In German. 1.50

3985-3986 PB L 73503 — Titration process on the basis of permanganate and manganate. By Chyla. Apr 1, 1939. In German. 1.50

3987-3994 PB L 73503 — Determination of bromine and chlorine in mixture. By Grundmann. Dec 8, 1938. In German. 1.50

3995-3997 PB L 73503 — Volumetric determination of sulfate-ions. Apr 6, 1939. In German. 1.50

3998-4006 PB L 73503 — Determination of phosphorus and nitrogen. Mar 31, 1939. In German. 1.50

4007-4011 PB L 73503 — Determination of 4-cresol. By Dett. Apr 12, 1939. In German. 1.50

4012 PB L 73503 — Determination of halogens in the side chain of aromatic compounds. Apr 25, 1939. In German. 1.50

4013-4026 PB L 73503 — Colorimetric determination of traces of heavy metals in ammonium salts and ureas. By Abrahamczik. Apr 18, 1939. In German. 1.50

4027-4034 PB L 73503 — Application of electric methods in microchemistry. By Ehrhardt. May 1939. In German. 1.50

4035-4038 PB L 73503 — Determination of acetylene and vinyl acetylene in the presence of each other. By Honecker. Jun 20, 1939. In German. 1.50

4039-4043 PB L 73503 — Quantitative tests of synthetic tannins according to the filter process. By Hiltner. Jun 16, 1939. In German. 1.50

4044-4048 PB L 73503 — Report of the 24th plenary meeting of the committee of chemists of the "Verein Deutscher Eisenhüttenleute". By Classen. Jul 6, 1939. In German. 1.50

4049-4066 PB L 73503 — Determination of isoparaffin content in soft and hard paraffins. By Leithe. May 13, 1939. In German. 2.00

4067-4077 PB L 73503 — Determination of the content of normal paraffin in gasolines, middle oils and paraffins. By Leithe. Aug 2, 1940. In German. 1.50

4078-4084 PB L 73503 — Testing 3 alcohol samples from "Ruhrchemie". By V. Leibnitz, and Leithe. Mar 8, 1940. In German. 1.50

4085-4089 PB L 73503 — 1-Amino-6-naphthol. By Grundmann. Jul 19, 1939. In German. 1.50

4090-4098 PB L 73503 — Analysis of methylamine-bases. By van Hulle. Aug 16, 1939. In German. 1.50

4099-4105 PB L 73503 — Determination of acetylene in gas-mixtures containing principally acetylene. By Wulle. Jul 20, 1939. In German. 1.50

4106-4111 PB L 73503 — Transportation vessels for liquid air. By Zepf. Jul 21, 1939. In German. 1.50

4112-4114 PB L 73503 — Determining the content of benzene, nitrobenzene and aniline. By Dett. Jan 23, 1939. In German. 1.50

4115-4117 PB L 73503 — Specific gravity of aqueous butanol solutions. By Brantner. Sep 22, 1939. In German. 1.50

4118-4120 PB L 73503 — Determination of vinyl acetate and ethylidene diacetate. By Merz. Sep 22, 1939. In German. 1.50

4121-4134 PB L 73503 — Analysis of Buna S. Oct 9, 1939. In German. 1.50

4135-4139 PB L 73503 — Determination of propargyl alcohol. By Schlichting and Klager. Oct 14, 1939. In German. 1.50

4140-4143 PB L 73503 — Experiments on the formation of phosgene by conducting difluorodichloromethane-air-mixtures through burning cigars. By Fach. Nov 7, 1939. In German. 1.50

4144-4145 PB L 73503 — Determination of gallic acid. By Bach. Nov 23, 1939. In German. 1.50

4146-4153 PB L 73503 — Determination of paraldehyde in the presence of acetaldehyde. By Scheurle. Apr 28, 1939. In German. 1.50

4154-4157 PB L 73503 — Determination of benzene and toluene in technical benzenes. By Dott. Oct 16, 1939. In German. 1.50

4158-4169 PB L 73503 — Properties and behavior of lignin sulfonic acid. By Hiltner. Oct 10, 1938. In German. 1.50

4170-4186 PB L 73503 — Lignin sulfonic acid and dihydroxydiphenylsulfone formaldehyde-resins. By Hiltner. Jun 26, 1939. In German. 2.00

4187-4191 PB L 73503 — Determination of cellulose-adipinate in the presence of cellulose acetate. By van Hulle. Nov 22, 1939. In German. 1.50

4192-4194 PB L 73503 — Determination of dimethylaniline in the presence of aniline and diphenylamine. By Stoltenberg. Dec 9, 1939. In German. 1.50

4195-4196 PB L 73503 — The system alizarin-sodium hydroxide solution. By Binkele, and v. Susich. Jan 22, 1940. In German. 1.50

4197-4223 PB L 73503 — Micro-analytic determination of oxygen. By Unterzaucher. Jan 1940. In German. 3.00

4224-4229 PB L 73503 — Ultraviolet-absorption of 1,3-butylene glycol. By Behrens. Nov 15, 1939. In German. 1.50

4230-4238 PB L 73503 — Colorimetric determination of p-phenylenediamine in styrene. By Sodomann. Feb 13, 1940. In German. 1.50

4239-4248 PB L 73503 — Determination of small quantities of acetylene in ethylene. By Schaefers. Nov 10, 1939. In German. 1.50

4249-4261 PB L 73503 — Determination of sulfur, phosphorus and arsenic in acetylene. By Hieke and Grassner. Feb 28, 1940. In German. 1.50

4262-4263 PB L 73503 — Naphthalene-hot pressed material. By Dott. Mar 8, 1939. In German. 1.50

4264-4266 PB L 73503 — Color reaction on aluminum with "Ponta Chrome Blue Black R". By Rast. Apr 27, 1939. In German. 1.50

4267-4274 PB L 73503 — Testing of dyes for foodstuffs on the content of bases. By Stoltenberg. May 22, 1939. In German. 1.50

4275-4283 PB L 73503 — Methods for measuring low pressures. By Mayrhofer. Mar 29, 1940. In German. 1.50

4284-4286a PB L 73503 — Micro-analytic determination of carbon/hydrogen. By Ohle. Jan 26, 1940. In German. 1.50

4287-4297 PB L 73503 — Production of butadiene. By Saurwein. Jun 14, 1938. In German. 1.50

4298 PB L 73503 — Detrimental elements in bath-solutions of mercury cells. Apr 30, 1940. In German. 1.50

4298a-4303 PB L 73503 — pH-determination by means of a glass electrode. By Ehrhardt. Jan 12, 1940. In German. 1.50

4304-4305 PB L 73503 — Method of analysis for the chlorine-alkali electrolysis. By Ehrhardt. 1940. In German. 1.50

4306-4313 PB L 73503 — Bromometric determination of sodium sulfide, sodium polysulfide, sodium sulfite and sodium pyrosulfite. By Wegnitz. Dec 12, 1939. In German. 1.50

4314-4316 PB L 73503 — Water content of dried electrolyte-chlorine. By F. Spoun. Apr 8, 1940. In German. 1.50

4317-4324 PB L 73503 — Analysis of dihydroxydiphenylsulfone. By Mueller. Nov 22, 1939. In German. 1.50

4325-4336 PB L 73503 — Testing for excess coloring matter in colored foodstuffs. By R. Stoltenberg. Jul 19, 1939. In German. 1.50

4337-4352 PB L 73503 — Methods for detecting naphthylamines, phenyl-naphthylamines and aldolnaphthylamines. By Rast. Jun 10, 1939. In German. 2.00

4353-4357 PB L 73503 — Determination of amine in methanol. By van Hulle. n.d. In German. 1.50

5358-4376 PB L 73503 — Determining the pure content of sodium dithionite. By van Hulle. May 4, 1940. In German. 2.00

4377-4381 PB L 73503 — Addition of carbon monoxide and hydrogen to olefines. By Schuster and Hartmann. May 31, 1940. In German. 1.50

4382-4383 PB L 73503 — Determination of small quantities of carbon monoxide in acetylene. By Honecker. Jun 18, 1940. In German. 1.50

4384-4385 PB L 73503 — Determination of aniline in aqueous solution. By Schartow. Jun 27, 1940. In German. 1.50

4386-4389 PB L 73503 — The micro-process of Dumas as a general determination of nitrogen. By Unterzaucher. Jun 14, 1940. In German. 1.50

4390 PB L 73503 — Processing of "Bittern blocks" (bitter mineral). n.d. In German. 1.50

4391-4397 PB L 73503 — Evolution of gas in nitrocellulose lacquer. n.d. In English. 1.50

4398-4399 PB L 73503 — Determination of dimethylamine. Dec 27, 1939. In German. 1.50

4400-4404 PB L 73503 — Gasometric determination of chlorine and carbon dioxide. By Hohn. n.d. In German. 1.50

4405-4408 PB L 73503 — Determination of the hydrogenation number for volatile substances. Nov 19, 1940. In German. 1.50

4409-4414 PB L 73503 — pH-measuring by means of a glass electrode. n.d. In German. 1.50

4415 PB L 73503 — Volumetric determination of aluminum. n.d. In German. 1.50

4416-4424 PB L 73503 — Quantitative determination of styrene. By Schattner. Mar 28, 1940. In German. 1.50

4425-4429 PB L 73503 — Comparison of the refractometric and chemical determination of styrene. By Schattner. Mar 28, 1940. In German. 1.50

4430-4434 PB L 73503 — Fractionation of small amounts of substances. By Dott. Jun 27, 1940. In German. 1.50

4435-4436 PB L 73503 — Determination of persulfate in the presence of hydrogen peroxide. By Schartow. Nov 22, 1940. In German. 1.50

4437-4441 PB L 73503 — Determining the content of sodium dithionite according to the silver method. By van Hulle. Nov 22, 1940. In German. 1.50

4442-4453 PB L 73503 — Titrations with "Ferroin". Dec 3, 1940. In German. 1.50

4454-4463 PB L 73503 — Colorimetric determination of magnesium in soil tests. By Abrahamczik. Dec 16, 1940. In German. 1.50

4464-4532 PB L 73503 — These frames are missing.

4533-4574 PB L 73503 — Sodium-metaphosphates and sodium-polyphosphates. By Faber. Sep 3, 1940. In German. 4.50

Analytical Chemistry (contd)

4575-4594 PB L 73503 — The problem of waste gases from sulfuric acid plants. By Siedler. Jan 10, 1941. In German. 2.00

4595-4607 PB L 73503 — Determination of sulfonate in "Mesapons" and soaps. By Markus. Jan 20, 1941. In German. 1.50

4608-4613 PB L 73503 — Volumetric determination of sulfate with sodium rhodizonate as indicator. By Hiltner. Nov 30, 1940. In German. 1.50

4614-4618 PB L 73503 — Explosion safety device for acetylene gas mains. By Keyssner. Nov 13, 1940. In German. 1.50

4619-4624 PB L 73503 — Method for determining "Emulsifier 1000". By Hengstenberg. Nov 30, 1939. In German. 1.50

4625-4630 PB L 73503 — Indirect determination of the polymerized styrene during polymerization. By Dennstedt. n.d. In German. 1.50

4631-4635 PB L 73503 — Decomposition of Buna S. By Teupel. Jan 31, 1939. In German. 1.50

4636-4648 PB L 73503 — Monoamino-phosphatides from plants. By Roth. Feb 14, 1940. In German. 1.50

4649-4651 PB L 73503 — Determination of neutral oils in "Mesapon" and "Mersol". By Eckhardt. Apr 8, 1941. In German. 1.50

4652-4654 PB L 73503 — Determination of water in acetone. By Kroecker. Mar 6, 1941. In German. 1.50

4655-4671 PB L 73503 — Reduction of the inflammability of oleins when greasing wool. By Stadler. Sep 28, 1928. In German. 2.00

4672-4673 PB L 73503 — Processing of palladium residues to palladium black. By Leinert. Mar 1941. In German. 1.50

4674-4732 PB L 73503 — Analytical instructions for the selenium factory. n.d. In German. 6.00

4733-4751 PB L 73503 — Fruit preserving polishes, II. By Linser. Jul 17, 1939. In German. 2.00

4752-4774 PB L 73503 — Fruit preserving polishes. By Linser. May 9, 1938. In German. 2.50

4775-4779 PB L 73503 — Retardation of ripening of bananas by preservation polishes. By Linser. Apr 9, 1938. In German. 1.50

4780-4786 PB L 73503 — Comparison of the total consumption and the quantity of preserving polish adhering to apples. By Linser. Dec 23, 1939. In German. 1.50

4787-4799 PB L 73503 — Further fruit preservation experiments with I.G. wax emulsions. By Linser. Jun 18, 1940. In German. 1.50

4800-4807 PB L 73503 — Separation of dicarboxylic acid from monocarboxylic acid. By Abrahamczik. Mar 18, 1941. In German. 1.50

4808-4812 PB L 73503 — Colorimetric determination of peroxides in unsaturated compounds. n.d. In German. 1.50

4813-4821 PB L 73503 — Determination of ammonia and urea-nitrogen. By Ohle. Nov 14, 1940. In German. 1.50

4822-4825 PB L 73503 — Improved method of analysis for "Emulsifier 1000". By von Hulle. Mar 28, 1941. In German. 1.50

4826-4838 PB L 73503 — Testing of Leuna alcohol. By Heubach. Apr 9, 1941. In German. 1.50

4839-4841 PB L 73503 — Analysis of "Mesapon" and "Mesapon"-detergents. Apr 10, 1941. In German. 1.50

4842 PB L 73503 — Determination of chlorite in the presence of hypochlorite, chlorate and chloride. By Chyla. Jan 17, 1941. In German. 1.50

4843-4850 PB L 73503 — Increase of the effect inhibiting the coagulation of blood by aliphatic hydroxy-carboxylic acids and multivalent alcohols. By Brandeis. Jun 27, 1940. In German. 1.50

4851-4866 PB L 73503 — Determination of olefines and aromatics in hydrocarbon mixtures. By Schlenk. Apr 7, 1941. In German. 2.00

4867-4872 PB L 73503 — Improvement in the micro-determination of nitrogen according to Dumas. By Korecker. May 17, 1941. In German. 1.50

4873-4883 PB L 73503 — Analysis of liquid mixtures by fine fractionation. By Blumrich. May 17, 1941. In German. 1.50

4884-4894 PB L 73503 — Conductivity titration in the analysis of soaps containing "Mersolat". By Eckhardt. May 16, 1941. In German. 1.50

4895-4913 PB L 73503 — The block polymerization of vinyl ether. By Pinkentscher and others. Apr 8, 1941. In German. 2.00

4914-4928 PB L 73503 — The determination of sulfonic acid, sulfuric acid, water and unsulfonated substances in "phenyl mepasin sulfonic acid". By Werniger. Apr 30, 1941. In German. Two supplements. 1.50

4929-4935 PB L 73503 — See Frames 4099-4105.

4936-4956 PB L 73503 — Determination of gaseous olefines in the presence of each other. By Wulle. Jan 15, 1940. In German. 2.50

4957-4973 PB L 73503 — The chemical test of aliphatic compounds. By Blumrich. Mar 20, 1941. In German. 2.00

4974-4977 PB L 73503 — Determination of the bromine number of liquids containing olefines. By Klein. May 22, 1941. In German. 1.50

4978-4980 PB L 73503 — Determination of solubility of softening agents in water. By Bandel. Jun 30, 1941. In German. 1.50

4981-4982 PB L 73503 — Determination of ethylene oxide in the presence of sulfur dioxide. By Honecker. Mar 18, 1941. In German. 1.50

4983-4999 PB L 73503 — Determination of sodium sulfate and sodium sulfite in "Mersolat" and "Mersolat" containing soaps. (Mesapone). By Eckhardt and others. Jun 17, 1941. In German. 2.00

5000-5006 PB L 73503 — Benzidine method for the analysis of "Mersolat" containing soaps. By Eckhardt. Jun 21, 1941. In German. 1.50

5007-5008 PB L 73503 — Determining the content of 2-nitro-4-amino-diphenylamine-4-sulfonic acid. By Meyer II. Jul 9, 1941. In German. 1.50

5009-5012 PB L 73503 — Determination of double and triple compounds by hydrogenation. By Fach. Jul 18, 1941. In German. 1.50

5013-5020 PB L 73503 — Iron oxide pigments from bauxite residues. By Böttcher. Aug 6, 1941. In German. 1.50

5021-5023 PB L 73503 — Detection of "Polmin P" in papers resistant to moisture. By Wilfinger. Mar 7, 1941. In German. 1.50

5024-5037 — Analytical apparatus for determining the

PB L 73503 concentration of chlorine in chlorine gas mixtures. By Koehler. Mar 11, 1941. In German. 1.50

5038-5060 PB L 73503 Composition of the technical emulsifiers "Nekal BX Lu and E 1000 Schko". By Scheurle. Jul 23, 1941. In German. 2.50

5061-5068 PB L 73503 Analysis of liquid mixtures by fine fractionation. By Blumrich. Aug 22, 1941. In German. 1.50
Supplement to the report of 17 May 1941, Dr. Blumrich.

5069 PB L 73503 Identifying alcohols as phenylurethanes. Sep 4, 1941. In German. 1.50

5070-5072 PB L 73503 Determining the content of "acetoparamine-I-acid-urea". By Stoltenberg. Sep 26, 1941. In German. 1.50

5073-5076 PB L 73503 Vapor tensions of aqueous solutions of hydrocyanic acid at 20°. By Lechner. Apr 12, 1941. In German. 1.50

5077-5082 PB L 73503 Development of the Kjeldahl process to a generally useful method for determining nitrogen. By Zinnecke. Jun 28, 1941. In German. 1.50

5083-5098 PB L 73503 Quantitative determination of formaldehyde on the fiber and determination of the water content. By Schäffer and Bandel. Aug 15, 1941. In German. 2.00

5099-5106 PB L 73503 Analysis of unsaturated compounds, determination of the thiocyanate value. By Pauli. Oct 23, 1937. In German. 1.50

5107-5118 PB L 73503 Determination of sulfate in sulfonate containing washing and wetting agents. By Eckhardt. Dec 4, 1941. In German. 1.50

5119-5129 PB L 73503 Determination of the tanning value. Dec 20, 1941. In German. 1.50

5130-5138 PB L 73503 Determining the purity of butadiene. By Wenning. Dec 12, 1941. In German. 1.50

5139 PB L 73503 Determination of nicotinic acid in plants. By Roth. Sep 24, 1941. In German. 1.50

5140-5143 PB L 73503 Detection of "Mesapon N". Jan 21, 1942. In German. 1.50

5144-5155 PB L 73503 Quantitative spectrographic determination of impurities in technical ammonium sulfate. By Koerber. Jan 9, 1942. In German. 1.50

5156-5169 PB L 73503 Colorimetric determination of magnesium with titanium yellow. By Abrahamszik. Jan 19, 1942. In German. 1.50

5170-5173 PB L 73503 Determination of benzene in cyclohexane. By Antoni. Aug 20, 1941. In German. 1.50

5174-5185 PB L 73503 Determination of water in lower fatty acids and their mixtures. By F. Mueller and Grassner. Jan 24, 1942. In German. 1.50

5186-5191 PB L 73503 Saving of ethyl alcohol in the determination of neutral oil. By Eckhardt. Feb 16, 1942. In German. 1.50

5192-5203 PB L 73503 Formation of disulfochlorides in the sulfochlorination of higher molecular hydrocarbons. By Asinger and Naggatz. Sep 22, 1941. In German. 1.50

5204-5208 PB L 73503 Determination of the components in raw xylidine. Dec 5, 1941. In German. 1.50

5209-5223 PB L 73503 Determination of the lead content in fuels. By Grassner. Mar 25, 1942. In German. 1.50

5224-5227 PB L 73503 Rapid determination of "Versol sulfonic acid". By Vogel. Apr 21, 1942. In German. 1.50

5228-5240 PB L 73503 Determination of drying substances for harvest products. By Roth. Mar 30, 1942. In German. 1.50

5241-5243 PB L 73503 Detection of acetylene and homologues in acetaldehyde. By Coenen. Sep 2, 1941. In German. 1.50

5244-5247 PB L 73503 Testing of a first running of butanol. By Coenen. Nov 8, 1941. In German. 1.50

5248 PB L 73503 Determination of butanone in mixtures of lower fatty acids. By Grassner. n.d. In German. 1.50

5249-5255 PB L 73503 The limits of quantities of ammonia which can be added to the condensate for rendering the feed water innocuous. By Wesly. May 21, 1942. In German. 1.50

5256-5262 PB L 73503 Solubility of calcium carbonate in pure and in decarbonized water. By Wesly. May 22, 1942. In German. 1.50

5263-5272 PB L 73503 Fine fractionating columns with isothermal exchange of material. By Stern. May 11, 1942. In German. 1.50

5273-5275 PB L 73503 Determining the content of commercial caustic lime. By Wesly. May 26, 1942. In German. 1.50

PB L 73503-S. I.G. FARBENINDUSTRIE A.G. LUDWIGSHAFEN, GERMANY. Reports of analyses from various laboratories. (FIAT Microfilm Reel G 28, Frames 3621-5275, abstract cards). 1926-1942. 205p. Price: Microfilm $5.00 - Photostat -$14.00
Brief abstracts of the individual items on the above FIAT microfilm reel G 28, PB 73503, above, prepared by FIAT personnel in Germany.

PB L 88297. POLAK, H. and VENEKAMP, R. H. Interrogation of Prof. Kofler and Mrs. Kofler: Identification of organic compounds. Jul 1946. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Two types of experiments are used: (1) microscopical observation of the melting process of the mixture of the unknown substance, with a known substance, and (2) further identification is obtained by comparing the refractive index of the unknown substance with the indices of refraction of a set of standard glass powder.

*PB L 87926. STROSS, W. Rapid method for the gravimetric determination of silicon, with particular reference to aluminium alloys, as practiced in Materialprüfungsanstalt in Berlin. (BIOS Final Rept 1580, Item 21). Jul 1946. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
Details are given of a modified Regelsberger method for the determination of silicon in aluminum alloys. The improved method makes use of the flocculation of silicic acid by gelatine, and is simple and considerably more rapid than the well known original procedure.

Miscellaneous Chemicals

PB L 74383. DEUTSCHE GOLD- UND SILBERSCHEIDEANSTALT, VORM. RÖSSLER, FRANKFURT AM MAIN, GERMANY. Glass and porcelain colors. (FIAT Microfilm Reel G-280, Frames

Miscellaneous Chemicals (contd)
1-809) 1930-1945. 809 f. Price: Microfilm-$6.00- Enlargement print-$81.00
Each frame of this reel represents an individual formula for a glass or porcelain color or coating containing a precious metal. Some of the products are identified by code names or numbers only. This collection is continued in reel G-281, PB 74378. An index covering both reels is at the end of reel 281. In German.

PB L 74378. DEUTSCHE GOLD- UND SILBERSCHEIDEANSTALT, VORM. RÖSSLER, FRANKFURT AM MAIN, GERMANY. Glass and porcelain colors. (FIAT Microfilm Reel G-281, Frames 810-1715). 1930-1945. 906 f. Price: Microfilm-$6.00 - Enlargement print-$91.00
This FIAT microfilm reel is the continuation of reel G 280 (PB 74383). It contains further formulae for glass and porcelain colors. Each frame gives the formula for an individual product; sometimes the materials are identified by numbers only. The last frame 1715A contains an index for both reels. 1937. In German.

PB L 74882. I. G. FARBENINDUSTRIE A. G. A collection of chemical reports. (FIAT Microfilm Reel H 14, Frames 1683-2628) 1935-1944. 946 f. Price: Microfilm-$6.00 - Enlargement print-$95.00
This FIAT microfilm reel contains 55 reports concerning various aspects of the production of organic and inorganic chemicals. Individual reports, listed below, will be available as enlargement prints. Please include PB and frame numbers when ordering an individual item. These reports are in German.

Frames		Title	Price
1683-1698	PB L 74882	Polycyclic aromatics from hydrogenation products. By Pier. n. d. In German.	$2.00
1699-1731	PB L 74882	Hydrogenation gasolines. By Pier. n. d. In German.	3.50
1732-1735	PB L 74882	Continuous process for aldol. 1936. In German.	1.50
1736-1748	PB L 74882	Plant experiments with Pelton wheels for washing with varied pressures. By Pier. 1940. In German.	1.50
1749-1774	PB L 74882	Tests with gas compressors. By Pirzer. 1939-1942. In German.	3.00
1775-1778	PB L 74882	Preparation of enol ethers. By Runge. 1942. In German.	1.50
1779-1800A	PB L 74882	Cooling installation at Oppau. By Sachsse. 1942. In German.	2.50
1801-1829	PB L 74882	Analysis of the wash oil of the acetylene plant. By Sandhaas. 1938. In German.	3.00
1830-1836	PB L 74882	Decomposition of fluorite containing silicon by means of sulfur dioxide. By Schmidt. 1941. In German.	1.50
1837-1890	PB L 74882	Production of aluminum fluoride from ammonium fluoride. By Niesloff and Schmidt. 1942-1943. In German.	5.50
1891-1899	PB L 74882	Continuous process for cryolite production. By Niesloff and Schmidt. 1943. In German.	1.50
1900-1916	PB L 74882	Information on aqueous solutions of ammonium fluoride. By Niesloff and Schmidt. 1944. In German.	2.00
1917-1924	PB L 74882	Hydrogenation of liquid vinyl acetylene to butadiene by the analogs method. 1939. In German.	1.50
1925-1946	PB L 74882	Production of iron carbonyl from iron sulfides. By Staeger and others. 1937-1941. In German.	2.50
1947-2025	PB L 74882	Absorption of carbon monoxide by copper liquors. By Steinheil. 1937. In German.	8.00
2026-2040	PB L 74882	Corrosion of iron by ammoniacal liquor containing carbon dioxide. By Steinheil. 1937-1938. In German.	1.50
2041-2043	PB L 74882	Distillation analysis of crude butyl oil. By Steinheil. 1939. In German.	1.50
2044-2101	PB L 74882	Purification of hydrogen. By Steinheil. 1938. In German. For ammonia synthesis.	6.00
2102-2120	PB L 74882	Ammonia plant. By Steinheil. 1938. In German.	1.50
2121-2126A	PB L 74882	Measuring catalyst temperatures in ammonia synthesis. By Steinheil. 1938. In German.	1.50
2127-2128	PB L 74882	These frames are illegible.	
2129-2153	PB L 74882	Optimal temperatures in the catalyst furnace. By Steinheil. 1939. In German.	1.50
2154-2249	PB L 74882	Hydrogen purification. By Steinheil. 1939-1943. In German.	10.00
2250-2259	PB L 74882	Measurements of the resistance of cylindrical catalysts at high pressure. By Steinheil. 1943. In German.	1.50
2260-2261	PB L 74882	Self-emptying stripping receptacle. By Steinheil. 1943. In German.	1.50
2262-2270	PB L 74882	The effect of pressure on the butyl synthesis. By Steinheil. 1943. In German.	1.50
2271-2274	PB L 74882	Steel alloys in butyl synthesis. By Steinheil. 1943. In German.	1.50
2275-2286	PB L 74882	Methane formation during butyl synthesis. By Steinheil. 1943. In German.	1.50
2287-2293	PB L 74882	Experiments on using more carbon monoxide in the butyl process. By Steinheil. 1943. In German.	1.50
2294-2299	PB L 74882	Methanol production from butyl waste gas. By Steinheil. 1943. In German.	1.50
2300-2334	PB L 74882	Device and method for testing elastic films. By Friedrichsen. n. d. In German.	3.50
2335-2341	PB L 74882	Oxidation of ammonia from coking plant waste liquor. By van Taack. 1938. In German.	1.50
2342-2368	PB L 74882	Research on catalyst poisons in ammonia oxidation. By van Taack. 1938. In German.	3.00
2369-2382	PB L 74882	Compounds of olefinic character having C = C double bonds. By Tanneberger. n. d. In German.	1.50
2383-2389	PB L 74882	Decarbonization of carbonyl iron powder by means of oxygen. By Vogt. n. d. In German.	1.50

2420-2424 PB L 74882 Research on iron powders. By Vogt. 1941. In German. 3.50

2425-2441 PB L 74882 The speed of formation of ammonia from nitrogen-hydrogen mixtures. By Wengler. 1938. In German. 2.00

2442-2447 PB L 74882 Evaporation device with automatic feed. By Wesly. n. d. In German. 1.50

2448-2458 PB L 74882 Microdetermination of calcium and magnesium. By Wesly. 1940. In German. 1.50

2459-2469 PB L 74882 Decarbonization and desilification with "Magnohydrat" (calcined dolomite). By Wesly. n. d. In German. 1.50

2470-2474 PB L 74882 A diathermic protective coating for electric cooling pipes. By Wesly. 1940. In German. 1.50

2475-2477 PB L 74882 pH value and corrosion. By Wesly. 1940. In German. 1.50

2478-2485 PB L 74882 Removal of salts from aqueous crude glycol by means of "Wofatit." 1941. In German. 1.50

2486-2491 PB L 74882 The limit for adding ammonia to steam. By Wesly. 1942. In German. 1.50

2492-2498 PB L 74882 Solubility of calcium carbonate in pure water and in decarbonated water. By Wesly. 1942. In German. 1.50

2499-2505 PB L 74882 Analysis of commercial caustic lime. By Wesly. 1942. In German. 1.50

2506-2511 PB L 74882 Drying of calcium carbonate sludge. By Wesly. 1942. In German. 1.50

2512-2514 PB L 74882 Experiments for colorimetric determination of oil. By Wesly. 1942. In German. 1.50

2515-2517 PB L 74882 Controlled siphoning of liquids. By Wesly. 1942. In German. 1.50

2518-2524 PB L 74882 The resistance of iron thermally coated with zinc to liquors containing ammonia. By Wesly. 1942. In German. 1.50

2525-2531 PB L 74882 Production of ethylene from "Athangas Leuna." 1936. In German. 1.50

2532-2542 PB L 74882 Production of aluminum triformate from aluminum chloride solutions, particularly waste liquors. By Ziese. 1943. In German. 1.50

2543-2560 PB L 74882 Measurements of vibration for determining proper bearings in a pump. By Steinheil. 1935. In German. 2.00

2561-2596 PB L 74882 Automatic regulation of the flow of pulverized or broken-up solids. 1935. In German. 4.00

2597-2628 PB L 74882 Experiences with the Leuna device indicating carbon monoxide. By Steinheil. 1936. In German. 3.50

*PB L 85199. OSBORNE, RALPH M. Manufacture of 1, 4, 5, 8-naphthalene tetracarboxylic. (FIAT Final Rept 1298). Mar 1948. 5 p. Price: Mimeo-$0.25
This report represents essentially all the significant material available on the preparation of 1, 4, 5, 8-naphthalene tetracarboxylic acid ("Tetra" acid). The details were abstracted from the available reports on the production at I. G. Farben, Hoechst.

*PB L 86483. U. S. OFFICE OF TECHNICAL SERVICES. TECHNICAL INDUSTRIAL INTELLIGENCE DIVISION. Manufacture of methane chlorination products in I.G. Hoechst plant. (FIAT Final Rept 1299). Mar 1948. 34 p. Price: Mimeo-$1.00
The manufacture of chlorination products of methane in large scale is described. Illuminating gas is processed to substantantially pure methane and is reacted with electrolytic chlorine. The resulting mixture of methyl chloride, methylene chloride, chloroform and carbon tetrachloride is collected and separated by fractional condensation and subsequent distillation. Part of methyl chloride is recycled.

PB L 86483-S. I. G. FARBENINDUSTRIE A. G. Directions for the manufacture of methane chlorination products; and Chlorination of methane, detailed drawing no. 529610. (FIAT Final Rept 1299, Supp (MC 369E, MC 369G, MC 366)). Jan 1946. 34 p. Price: Microfilm-$1.75 - Photostat-$4.00
Three documents supplementing PB L 86483 are included in this report. Document MC 369E is an English translation of "Directions for the manufacture of methane chlorination products: Methylene chloride, methyl chloride, chloroform, carbon tetrachloride." Seven drawings are incorporated in the report. Document MC 369G is the German original of the report. Document MC 366 is a detailed drawing giving construction details of a methane chlorination furnace.

ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES

Electronics

PB L 88884. BICK, JOSEPH. Testing material supersonically. (CONLAN 100). n. d. 24 p. Price: Microfilm-$1.50 - Photostat-$3.00
The following points are discussed: the magnetostrictive and piezoelectric action, the theory of the application of supersonics for testing materials, supersonics in metallurgy, degasification of fused metals, effects on hardening and cooling of metal, dispersion of one metal in another in casting, tinning of aluminum, chemical properties of metals, and magnetic properties. Swedish translation.

PB L 86113. BROOKS, HARVEY. Theory of random and modulated noise. Dec 1943. 27 p. Price: Microfilm-$1.50- Photostat-$3.00
The following data are discussed: (1) Fourier representation of noise, (2) rectification of random noise, (3) demodulation of random noise, (4) modulated noise, (5) demodulation of modulated noise, and (6) fluctuations of noise amplitude. Graphs are included. Underwater Sound Laboratory, Harvard University.

*PB L 89718. CHASE, JOHN P. and O'BRIEN, ROBERT S. Radio and radar activities at Kothen airfield. Interrogation of Baron Peter von Schacky. (CIOS Item 1, File XXIV-15). Apr 1945. 15 p. Price: Microfilm-$1.25 - Photostat-$2.00
These comments summarize information obtained at Köthen airfield; (A) organization, (B) equipment inspected. Part II covers the interrogation.

Electronics (contd)

PB L 85958. CLARK, E. H. Joint DSL-CSL field communication tests. (Detroit Signal Lab Assignment Memo SSB-192-A) Jun 1945. 32 p. Price: Microfilm-$1.75 - Photostat-$4.00
The purpose of this memorandum is to effect adequately initial coordination between the Coles Signal Laboratory and the Detroit Signal Laboratory on the relationship in the frequency range of 20 to 40 megacycles, between Signal Corps vehicular radio set performance requirements at maximum usable transmission range and current requirements for vehicular radio noise interference suppression. The tests and test procedures are described and conclusions with recommendations given. Seventeen graphs and one map are included.

PB L 87755. CLARK, T. H. and MARCHAND, N. Miscellaneous current direction finding problems. Investigation of compensation in direction finders. Final report. (OSRD Rept 6657). Sep 1945. 7 p. Price: Microfilm-$1.00-Photostat-$1.00
This is a discussion and comparison of a report on the subject by Mr. J. N. Pettit and a report issued by Federal Telephone and Radio Corporation in which it is concluded that basically there appears to be no theoretical disagreement between the two reports.

PB L 85969. FORMAN, LEWIS J. Shock hazard and its relation to A-C power units equipped with radio-frequency noise elimination components. (Detroit Signal Lab Eng Memo D-225-2-5-44). Mar 1944. 8 p. Price: Microfilm -$1.00 - Photostat -$1.00
The objective of this investigation was to establish the existence of electric shock hazard when suppression components having capacitance are installed in the output circuits of A-C power units and to determine the degree of such hazards. A distribution curve, schematic wiring diagram, and a shock hazard circuit are included.

PB 89970. HAMILTON, D. R. and others (editors). Klystrons and microwaves triodes. First edition. (Vol. 7 in the Mass. Institute of Technology, Radiation Laboratory series). 1948. 539 p. (Available from McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y., $7.50).
This volume attempts to cover the basic principles underlying the operation of klystrons and planar grid tubes as oscillators and amplifiers. No attempt has been made to describe how a vacuum tube is actually constructed. Rather the emphasis has been placed on presenting the fundamental material which the tube designer or tube user must have at his command. This volume has been written in parts based on tube types and construction, a division in form rather than in use or purpose. Following four introductory chapters discussing tube types and functions and basic electronic and circuit phenomena common to all types of tubes there is a part on planar grid tubes and a part on klystrons. This division makes the purely mathematical developments more logical than would have been the case if the division in function had been followed. Aside from a few special cases of r - f circuits which are used solely for microwave vacuum tubes, no attempt has been made in this book to discuss the general properties of distributed constant circuits, since these problems have been discussed thoroughly elsewhere in this series.

*PB L 89731. HANSELL, C. W. and others. Physical investigations of selenium and caesium-oxide surfaces, by Prof. Dr. Rudolph Brill. (CIOS Evaluation Rept 158). Jun 1945. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Contains information concerning characteristics of thin surface films, such as are used in some types of rectifiers and photocells, and the physical properties of sellenium, caesium-oxygen compounds by means of X-ray studies.

*PB L 89723. HUNT, C. L. and HACHENEISTER, C. A. A.E.G. Laboratories and E. Leybold's Nachfolgre Laboratorium, Clausthal-Zellerfeld. (CIOS Item 1, File XXIV-24, 25). May 1945. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
The report is divided into two parts: Part I dealing with a general description of A.E.G. laboratories, types of valves manufactured (a) water-cooled transmitting, (b) air-cooled magnetrons, (c) air-cooled triodes, related laboratories, documents and valves evacuated. Part II - E. Leybold's Nachfolgre Laboratorium - development of infrared receivers, radiosondes, associates of Leybold's, and documents evacuated.

*PB L 88301. JOCHEM, F. B. Franz Baumgartner, electrical control apparatus, Brachermühle, Ger. (FIAT Evaluation Rept 139). Aug 1945. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Makes solenoid operated mercury tube relays, telephone type relays, and gas tube relay.

PB L 85973. MAGER, R. B. Insertion-loss measurements on filters and feed-through-type capacitors from 40 to 144 megacycles. (Detroit Signal Lab Eng Memo D-260-E-S-45) Feb 1945. 58 p. Price: Microfilm-$2.25 - Photostat-$6.00
The specific objective of the investigation reported in this memorandum was to make available a procedure and associated equipment for the insertion-loss testing, over the frequency range of 40 to 144 megacycles, of filters and feed-through capacitors of the types employed for radio-noise-interference suppression purposes. It is concluded that the test procedure described in paragraph 8 of this memorandum will provide above requirements. Incl. 1 is a top view layout drawing of the test equipment. Incl. 2 through 5 show constructional details of two shielded boxes designed for filter and feed-through-capacitor tests. Incl. 6 is a schematic drawing showing changes in antenna circuit. Incl. 7 lists results of repeated insertion-loss measurements on each approved type filter and through-feed capacitor. Decibel values were computed from test data recorded in incl. 8. Incl. 9 through 11 are examples of measurements on a variety of filters. Incl. 12 shows results of tests on an experimental filter.

PB L 88266. NUCKOLLS, RICHARD G. and TRENT, HORACE M. The detection of internal leaks in aircraft hydraulic system. Dec 1946. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This paper describes a simple portable, ultrasonic vibration pick-up and amplifier designed for the detection and location of internal leakage in an airplane hydraulic system. In principle, the device monitors the ultrasonic vibrations produced in the system by the leaking valve, which vibrations are most intense at the defective element. Reprinted from The Journal of the Acoustical Society of America, v. 18, No. 2.

PB L 86351. PENNSYLVANIA. UNIVERSITY. MOORE SCHOOL OF ELECTRICAL ENGINEERING. Study of noise meters. Progress report 2. Apr 1946. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
A brief description of the progress is given on: (a) noise meter antennas, (b) design of a laboratory noise meter, and (c) design of detector circuit.

PB L 86352. PENNSYLVANIA. UNIVERSITY. MOORE SCHOOL OF ELECTRICAL ENGINEERING. Study of noise meters. Progress report 3. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Continuation of the work outlined in Progress report No. 2, PB 86351, this issue of the Bibliography.

PB 89969. PIERCE, J. A. and others (editors). Loran long range navigation. First edition. (Vol. 4 in the Mass. Institute of Technology, Radiation Laboratory series). 1948. 483 p. (Available from McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y., $6.00).
The purposes of the volume are to describe the Loran system, its principles, and its equipment, as they existed at the end of the war and to offer suggestions for their adaptation and improvement for civilian service in time of peace. Since electronic time measurements are fully discussed in other

volumes of this series, these techniques have not been treated in detail here. Similarly, relatively little space has been devoted to material found in the instruction books for various items of Loran equipment. Wherever possible, the individual chapters have been written by those members who have been most closely associated with the material concerned.

PB L 85948. PINES, BERTHA. Conformance tests on P. R. Mallory type no. B-116309 feed-through capacitors. (Detroit Signal Lab Eng Memo D-225-2-5-44). Apr 1944. 7p. Price: Microfilm -$1.00 - Photostat -$1.00
The purpose of these tests was to determine whether twelve production samples would meet the requirements of Signal Corps specifications. The test procedure is described and the results of tests are presented in a tabulated sheet of the test data, one recapitulation table of insertion-loss measurements, and one graph showing average insertion-loss curve.

PB 88505. POUND, ROBERT V. and DURAND, ERIC. Microwave mixers. First edition. (Vol. 16 in the Mass. Institute of Technology, Radiation Laboratory series). 1948. 389 p. (Available from McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y., $5.50).
This volume describes the design of the various microwave circuits that have been used as mixers in the microwave region at the Radiation Laboratory. The mixers convert the microwave signal into a signal at a lower frequency, where conventional lumped-constant circuits and multiple-element vacuum tubes are used. For information concerning the design of a complete microwave superheterodyne receiver, of which the mixer is a part, Vol. 23 (PB 89972) of this series is recommended. Low-frequency amplifiers of many types, for use following the mixer, are described in Vol. 18. A complete treatment of crystal rectifiers, which are the hearts of the mixers described in the present volume, is given in Vol. 15 (PB 88504). Duplexing circuits often required in pulse radar, and the tubes used in them are described in Vol. 14 (PB 88971). Low-level oscillators, which are used as local oscillators for the mixers, are treated in Vol. 7 (PB 89970) and Vol.11. Because the frequency of the local oscillator determines the sensitive frequency of the mixer, automatic frequency control has been considered to be closely related to the mixer; for this reason, the chapter on this subject by Eric Durand has been included in this volume.

PB 89971. SKULLIN, LOUIS D. and MONTGOMERY, CAROL G. Microwave duplexers. First edition. (Vol. 14 in the Mass. Institute of Technology, Radiation Laboratory series). 1948. 445 p. (Available from McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y., $6.50).
This volume is concerned with the theoretical and practical aspects of the design of duplexing circuits for use in microwave radar equipments, and of the gas-filled switching tubes (TR and ATR tubes) used in these duplexers. For a clearer picture of the equipment with which a duplexer must work the reader is referred to the following volumes of this series: Vol. 16 (PB 88505) "Microwave Mixers," Vol. 9 "Microwave Transmission Circuits," Vol. 23 (PB 89972) "Microwave Mixers," and Vol. 6 "Microwave Magnetrons."

PB 88506. SVOBODA, ANTONIN. Computing mechanisms and linkages. First edition. (Vol. 27 in the Mass. Institute of Technology, Radiation Laboratory series). 1948. 367 p. (Available from McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y., $4.50).
The book provides a general discussion of computing mechanisms in general, and a detailed study of the design of bar linkages for use in computers. It includes a full account of novel methods for the design of bar linkages serving as generators of functions of one and two independent variables. Special attention is paid to the design of the bar linkage multipliers.

PB 88504. TORREY, HENRY C. and WHITMER, CHARLES A. Crystal rectifiers. First edition. (Vol. 15 in the Mass. Institute of Technology, Radiation Laboratory series). 1948. 453 p. (Available from McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y., $6.00).
The purpose of this book is to present the fund of knowledge on crystal rectifiers accumulated during the course of World War II. The work described is the collective result of work done at many laboratories, Army, Navy, universities, and industrial, both in this country and in England, Canada, and other Dominions. A large fraction of the book has been devoted to the theory and properties of the crystal converter. Other applications are discussed in part III as special types. Detailed discussions of methods of measurement of crystal properties, description of standard test equipment for production and routine testing, and techniques for manufacturing converter crystals and other types are described in appropriate chapters.

PB L 89291. U. S. NATIONAL DEFENSE RESEARCH COMMITTEE. The propagation of radio waves through the standard atmosphere. Vol. 3. Summary technical report. 1946. 211 p. Price: Microfilm-$6.25 - Photostat-$22.00
The material presented was prepared by the Columbia University Wave Propagation Group whose effort has been to provide a book designed for men with college training in radio, physics, or electrical engineering, which states the basic laws of propagation, that is, shows how the characteristics of the earth and the atmosphere control the propagation of radio waves; gives the fundamental properties of the basic types of antenna systems, particularly their directivity and gain; gives the reflecting properties of targets such as airplanes for use in detection by radar; teaches the reader how to calculate field strength or obtain the coverage diagrams given a particular set, power, and site; gives the fundamental information required in the above calculations for application to the radar and communication set used in operational theaters; and provides illustrative material and sample calculations which show how the laws of propagation may be used in the location and operation of radar systems, communication sets, and counter measure equipment designed to deceive the enemy and to prevent jamming of equipment by enemy action or by mutual interaction of our own sets.

PB 89972. [illegible], S. [illegible] (editor). Microwave receivers. First edition. (Vol. 23 in the Mass. Institute of Technology, Radiation Laboratory series). 1948. 630 p. (Available from McGraw-Hill Book Co., 330 W. 42nd St., New York 18, N. Y., $8.00).
The receivers and circuits treated in this volume sprung almost entirely from radar techniques. It is felt that many of the features are applicable in other services where high sensitivity and excellent transient behavior are required. An attempt has been made to reach a sufficiently fundamental standpoint in the presentation to permit such use in allied fields.

PB L 88296. VERSCHUUR, J. J. Focussing of electron-beams by means of ions. Sep 1946. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
High grade focussing of electron-beams can be achieved by means of electron-optical systems. This brief description is accompanied by three sketches.

PB L 88881. WALTER, R. Mathematical analysis of the longitudinal control characteristics of submarine V 80/A 63. (Accurate Translation Service Rept 57). Oct 1940. 37 p. Price: Microfilm-$1.75 - Photostat-$4.00
The report is divided as follows: (1) symbology, (2) introduction, (3) equation of motion, (4) action of the automatic control, (5) hydrodynamic coefficients, (6) water masses carried along are calculated in accordance with the customary approximation formulae, (7) method for a mathematical solution of the equation of motion, (8) scope of investigations, and (9) results shown in the form of curves. Graphs attached. Aerodynamic Research Institute, Hermann Goering Institute for Aerodynamics. This report will not reproduce well.

PB L 89013. ZINKE, O. Theory and techniques of antennas. Part II: Broad-band antennas, transformers and cables. (AAF Translation 2223). Feb 1946. 208 p. Price: Microfilm-$6.00 - Photostat-$21.00
The theory and techniques of the following subjects are discussed: Broad-band antennas, flat and tubular dipoles used as broad-band antennas; effects of reflector walls on the radius vector of broad-band tubular dipoles, construction of large broad-band antennas, dielectric directional radiators for dm and cm waves, matching of dipole antennas, coaxial cables, broad-band line transformers, etc.

Miscellaneous

PB L 86272. BUSEMANN, F. High-voltage, long-distance transmission. Sep 1945. 93 p. Price: Microfilm-$3.25- Photostat-$10.00
Dr. Busemann's report was thought to be of such fundamental and general interest that it should be brought to the attention of American engineers. Therefore, Alexander Dovjikov, U. S. Department of Interior has translated it as close to the original as possible, sometimes even at the risk of offending the rules of English syntax. The three main divisions are: 400 kv 3-phase, a.c. transmission, (2) high voltage, direct-current transmission, and (3) critical stand regarding d.c. versus a.c. Each division has been further subdivided into various topics. Photographs, diagrams and bibliography are included.

PB L 86886-PB L 86896. FEE, JOHN C. (comp.). Electric equipment manufacturers in Japan. Books I-IX. Jul-Aug 1946. Titles, paging and prices as follows:

PB	Book	Subject	Pages	Prices Micro	Photo.
L 86886	I Part A	Miscellaneous electric equipment	95	$3.25	$10.00
L 86887	I Part B	Miscellaneous electric equipment	95	3.25	10.00
L 86888	II	Electric furnaces	38	1.75	4.00
L 86889	III	Electric machines	102	3.50	11.00
L 86890	IV Part A	Power winches			
	Part B	Concrete mixers	30	1.50	3.00
L 86891	V	Electrical and mechanical appliances	138	4.25	14.00
L 86892	VI	Motors	77	2.75	8.00
L 86893	VII	Switches	57	2.25	6.00
L 86894	VIII	Wires	124	4.00	13.00
L 86895	IX Part A	Radio, telegraph, telephone, etc.	105	3.50	11.00
L 86896	IX Part B	Radio, telegraph, telephone, etc.	99	3.25	10.00

The reports of these companies, obtained from an extensive file in Japan, are here reproduced and bound in alphabetical order and according to the main products of each company as listed above in the title for each PB number. Book I is dated July 1946; the remainder August 1946.

PB L 73696. KUHLMANN. Progress in the field of graphitizing electrodes. (FIAT Microfilm Reel CC 250, Frames 1-2) Mar 1947. 2 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
This is a short memorandum concerning the production of graphite electrodes in Germany. In German.

PB L 87262. NATIONAL RESEARCH COUNCIL OF CANADA. ELECTRICAL ENGINEERING AND RADIO BRANCH. Progress report for July, August, September 1947. (Rept ERA-145). Dec 1947. 14 p. Price: Microfilm-$2.00 - Photostat-$5.00
The report is divided into the following sections: (1) electrical engineering, (2) electronics, (3) radar, (4) radiophysics, (5) standard frequency services, (6) publications, and (7) Scarboro Field Station. Photographs and diagrams are included.

PB L 87477. PARROTT, J. A. Report on quadded toll cables. Aug 1945. 16 p. Price: Microfilm-$1.25 - Photostat-$2.00
A number of practices are followed in the design installation and maintenance of German communication cable plant which are different from American general practice. Among these are the use of aluminum wire, helical cord spacers on conductors, spiral-four (in some cases), styroflex insulation (to a limited extent), straight splices, underground repeater and terminal offices. Some of these measures were employed for other than commercial service or economical reasons, some have been known to the art for many years and may offer sufficient promise to warrant detailed studies of the advantages and disadvantages.

PB L 74226. ZENTRALE FÜR WISSENSCHAFTLICHES BERICHTS-WESEN DER LUFTFAHRTFORSCHUNG DES GENERALLUFTZEUGMEISTERS. Seven ZWB reports. (BICS Microfilm Reel F.D. C.R.B. 83; S.O. 1382/47, Frames not numbered) 1940-1942. 381 f. Price: Microfilm-$4.75 - Enlargement print-$38.50
This microfilm reel contains seven research reports (Forschungsberichte) listed as they occur on the reel as follows: ZWB FB 1627, The control amplifier, by Schwenkhagen, Sep 1942 (previously made available seperately as PB 36160, vol. 3, p. 246, this Bibliography); ZWB FB 1574, A new highly sensitive aviation type temperature measuring device, by D. Jakob, n. d. (previously made available separately as PB 37208, vol. 3, p. 734, this Bibliography); ZWB FB 1680, The effect of various electromagnetic shields, by Hans Schäffer, Sep 1942; ZWB FB 1219/2, Testing of contact materials, by H. E. Linck and W. Rump, Jun 1940. (For ZWB FB 1219/1 see PB 76753, vol. 6, p. 486, this Bibliography.) ZWB FB 1219/3, Testing of contact materials. Measurement of resistance of contacts following storage in tropical climate, by H. E. Linck and W. Rump, Jul 1940 (previously made available separately as PB 61916, vol. 6, p. 486, this Bibliography); (For ZWB FB 1219/4 see PB 61464, vol. 6, p. 486, this Bibliography.) ZWB FB 1834, Contact research with noble metals and noble metal alloys, by Albert Ross and others, n. d.; ZWB FB 1219/5, Testing of contact materials. 4. Intermediate report. Contact materials of silver and gold alloys, by H. E. Linck and W. Rump, Dec 1941. In German.

FUELS AND LUBRICANTS

PB L 88871. FEUERLANDWERKSTAETTEN ERNST BEILHACK, GEROLDSHAUSEN, GERMANY. The Jentzsch ignition rating tester: Description of the apparatus and the method for testing oils, fuels and other materials. (German patent no's. 408,457; 671,161; 679,357; other patents pending). 1941. 110 p. Price: Microfilm-$3.50 - Photostat-$11.00

A description and operating instructions for type FW, Model 1941, with bibliography and tables. Translated from a German instruction book.

PB L 62213 - PB L 62216. GASU NO SEKAI-SHA, TOKYO. Gasu no Sekai (The world of gas). Vol. 10, Nos. 1-5, 7-12; vol. 11, Nos. 1-12; vol. 12, Nos. 1-12; vol. 13, Nos 1-12. 1940-1943. Paging and prices as follows:

PB No.	Volume	Number	Date	Pages	Prices: Micro.	Photo.
L 62213	10	1-5,7-12	1940	668	$14.00	$45.00
L 62214	11	1-12	1941	883	18.00	60.00
L 62215	12	1-12	1942	467	10.00	32.00
L 62216	13	1-12	1943	517	11.00	35.00

These documents are bound annual volumes of a Japanese technical journal dealing with the gas industry, its scope, new developments, related industries, etc. Typical articles include: The gas industry and changes in its usefulness; the camouflage of gas tanks as an air raid precaution; trends in the coke industry; aluminum casting in gas ovens (furnaces); a guide to the production of gas from coal; etc. In Japanese.

PB L 74757. I. G. FARBENINDUSTRIE A. G. Experiments on pressure hydrogenation. (FIAT Microfilm Reel M 147, Frames 3803-4676) 1938-1944. 874 f. Price: Microfilm-$6.00 - Enlargement print-$87.50

This is a collection of numerous progress reports, file notes, correspondence including records of telephone conversations and wires, tables, flow sheets, and drawings of apparatus. They all deal with pressure hydrogenation and dehydrogenation experiments carried out at the Ludwigshafen High Pressure Laboratory and at other I. G. plants, with the apparatus and catalysts used - the latter identified only by numbers - or with results of tests of the fuels obtained. Often technical expressions, abbreviations and code names are used. The meaning of some but not all of these is explained in a note at the beginning of the reel. Much of this reel is not very legible and may reproduce poorly. In German.

PB L 74777. I. G. FARBENINDUSTRIE A. G. Experiments on pressure hydrogenation. (FIAT Microfilm Reel M 148, Frames 4677-5521) 1935-1944. 845 f. Price: Microfilm-$6.00 - Enlargement print-$84.50

This reel is the continuation of reel M 147 (PB L 74757) described above. It contains similar mostly short reports, correspondence, etc., all dealing with high pressure hydrogenation and dehydrogenation and the resulting products. The partial list of technical expressions and abbreviations is repeated at the beginning of this reel. In German.

PB L 88876. JENTZSCH, H. Draft: A guide for the Jentzsch ignition value test method. Oct 1943. 100 p. Price: Microfilm-$3.25 - Photostat-$10.00

The following statements may be made regarding the method; it is based on the unchanging relationship between the ignitability of a substance and the temperature and oxygen concentration of the air; it is, therefore, suitable for testing all inflammable substances. See also PB 88876-S and PB 88876-S-2, this issue of the Bibliography.

PB L 88876-S. SUPPLEMENT to the presentation of Jentzsch's ignition value testing method. 1918-1941. 59 p. Price: Microfilm-$2.25 - Photostat-$6.00

The following information is given in this report: (a) orders concerning the introduction of the ignition value tester into the navy and the German Ministry of Transport, (b) testimonial from the Naval Departments, (c) testimonial from the motor industry and motor testing stations, (d) appraisals by scientific bodies, (e) technical literature on ignition value method, (f) transcripts from appraisal reports and other official statements, and (g) reprint: "The relation between pre-ignition and combustion systems in motors" (from the Chemical Institute of the Kiel University). Translation of German documents. Supplement to PB 88876, this issue of the Bibliography.

PB L 88876-S2. MEMORANDUM on engine tests of the Jentzsch ignition rating method carried out by the German Navy. Nov 1938. 45 p. Price: Microfilm-$2.00 - Photostat-$5.00

The review in this paper consists of a chronologic list of the comparative experiments carried out in the period from 1929 to 1938. It is added in conclusion that 15 years of experience with the ignition rating method as used in the testing of carburetor and diesel fuels have shown it to be unequaled by any other method developed either in Germany or in foreign countries. Supplement to PB 88876, this issue of Bibliography.

PB L 88870. JENTZSCH, HERMAN. The Jentzsch ignition coefficient tester. n. d. 21 p. Price: Microfilm-$1.50 - Photostat-$3.00

This tester is of the ignition block type. The crucible is made of rustless steel and situated in an electric furnace. It has four chambers of equal size and arranged symmetrically. One of the chambers acts as a thermometer pocket, while the remaining three are used as ignition chambers. These may be looked upon as engine cylinders in which the compression temperature is provided by heating, the pressure by the admission of oxygen, and the scavenging of the chambers by means of an easily removable evaporation plate of rustless steel. Each of the three ignition chambers is supplied with oxygen through a passage down the center of the crucible connecting at the bottom with three auxilliary channels, each one of which leads to an ignition chamber. The oxygen is taken from ordinary source of supply passing into way through a control valve and an oxygen bubble counter. Factual data and tables are given. Translated from the German article appearing as Item G, TOM Reel 175.

PB L 88872. KESSLER. The effect of air pressure on the fuel test in the spontaneous ignition tester. Vol. XV, No. 13. Apr 1939. 33 p. Price: Microfilm-$1.75 - Photostat-$4.00

The present report deals only with the results of the tests.

PB L 88875. MACHLEIDT and LIST. Chemistry I: Manual for the naval schools assigned to the ship's engine inspection command. Part II: Oils. 1943. 100 p. Price: Microfilm-$3.25 - Photostat-$10.00

This manual is concerned with the Jentzsch ignition rating tester, its design, operation, servicing, and tests. Tables attached. A translation of excerpts from a German textbook.

PB L 88877. MOHR, ULRICH. Spontaneous ignition and combustion processes. (Translated by H. Jentzsch) 54 p. Price: Microfilm-$2.25 - Photostat-$6.00

The present work aims to amplify what has thus far been learned about the influence of the various factors on the spontaneous ignition and to contribute to that knowledge. It also aims to amplify the relation of these factors to the motor combustion process and particularly with reference to the detonating tendency and ignitability. Inaugural dissertation submitted to the Christian-Albrecht University of Kiel.

PB L 89019. REINDORF, HEINRICH. Enthalpy-entropy diagram (combustion gas - kerosene). (AAF Tech Rept 1160). Feb 1948. 16 p. Price: Microfilm-$1.25 - Photostat-$2.00

The power output of turbojet power plants using kerosene for fuel may be computed more rapidly and accurately by means of these diagrams. The diagrams give only one curve of constant pressure for each fuel/air ratio, based on the products of combustion of one pound of air plus the fuel burned therein. An explanation and an example of the uses of the diagrams are given. The diagrams consist of an Enthalpy-Entropy diagram, two Specific Heat at Constant Pressure charts, and an Example-Problem Chart.

PB L 88977. SUPREME COMMANDER FOR THE ALLIED POWERS. NATURAL RESOURCES SECTION. The coal fields of Kyushu. (Rept 103). Feb 1948. 45 p. Price: Microfilm-$2.00 - Photostat-$5.00

Fifty-five percent of all coal mined in Japan is produced by the 149 coal mines on the island of Kyushu. The coal ranges in quality from highly volatile bituminous to anthracite. Kyushu has nine separate coal fields: the Chikuho and Kasuya-Fukuoka coal fields in the north; the Karatsu, Hokusho, and Nishisonogi coal fields in western Kyushu; the Amakusa field (principally anthracite) in the southwestern part; the Miike field in central Kyushu; the Asakura field just south of the Chikuho field; the Kokura field on the northwest edge of the Chikuho field. Total production for the Kyushu coal fields rose from 28,415,400 metric tons in 1937 to a wartime peak of 32,951,200 metric tons in 1940. Production for the 1946 fiscal year was 12,293,200 metric tons. The reserves of the field are large. At the beginning of the 1947 fiscal year they were calculated to be more than 5,000,000,000 metric tons. The Chikuho and Hokusho fields will probably furnish the bulk of future production. The coal of northern and western Kyushu occurs in a Paleogene sedimentary series which overlies unconformably a complex of pre-Tertiary rocks. It is concealed in part beneath basic volcanics of late Tertiary and Quaternary age and unconsolidated Quaternary sediments. The sediments are folded and faulted as a result of late Tertiary and Pleistocene tectonic disturbances. All the mines in western Kyushu are located at or near ports from which coal may be shipped by water to the consuming areas. Those in the northern part of the island are favored by their proximity to the large industrial centers of western Honshu. Those in the Nishisonogi field are island mines.

*PB L 87391. THOMAS, W. H. and WITHERS, J. G. Chemisch - Physikalische Versuchs Anstalt der Marine, Kiel: Fuels, lubricants and organisation. (BIOS Final Rept 1210, Item 30). Oct 1945. 33 p. Price: Microfilm-$1.75 - Photostat-$4.00

The report gives answers to a standard questionnaire and details of the organization of the Versuchs Anstalt, a central organization dealing with the investigation of all technical problems of the German Navy. A list of samples collected from Naval sources in the area is given. "It is not considered that the persons interviewed were very knowledgeable on the subjects discussed."

PB L 88873. ZERBE, CARL and ECKERT, FRANZ. Autogenous ignition properties and chemical constitution. May 1932. 39 p. Price: Microfilm-$1.75 - Photostat-$4.00

The investigation reported aimed at the following tests: (1) the effect of chemical composition, (2) the effect of the "hydrogen number," i.e. the ratio of hydrogen to carbon, and (3) the effect of the oxygen content of the molecule on the autogenous ignition phenomena of the homologous hydrocarbons of the paraffinic, the olefine, the naphthene, and the aromatic series. Factual data and tables are given. Chemical Institute, University of Kiel. Translated from an article in Angewandte Chemie, v. 45, p. 593.

LEATHER AND LEATHER PRODUCTS

*PB L 86508. BRAYBROOKS, W. E. and others. German sole leather tanneries. (BIOS Final Rept 912, Item 22). n. d. 75 p. Price: Microfilm-$2.75 - Photostat-$8.00

The report covers investigation of twenty-two targets on: tanning processes, raw materials, use of synthetic tanning materials, utilization of by-products, and manufacture of substitute leathers. Attached to the report are: chemical and physical tests on ten samples of German sole leather, photomicrographs, extracts from German Army specifications, price lists, and synthetic tans.

*PB L 85610. CAUNCE, A. E. and others. The German light leather industry. (BIOS Final Rept 1425, Item 22). Apr-May 1946. 216 p. Price: Microfilm-$6.25 - Photostat-$22.00

In order to investigate the technical aspects of the German leather manufacture twenty-nine firms were visited and an individual report is given for each firm covering in detail plant and machinery, labor and craftmanship, process work, chemical control and production. A diagram of air circulation in drying room, sectional elevation of two-tone printing machine, sectional drawing of "Uninax" grinding mill, sectional drawing of the "Lichman" grinding mill and a diagramatic sketch of a leather pulp breaker are included.

*PB L 87928. FITZGERALD, J. S. "Lefa" sheet leather board from scrap. (BIOS Final Rept 1583, Item 22). May 1947. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

The utilization of fresh scrap leather for the manufacture of semi-synthetic leather sheet known as "Lefa" (leder faser) has been briefly described in BIOS Final Rept 153, pp. 15-16, 73-76 (PB L 28391, v. 2, p. 114, this Bibliography); BIOS Final Rept 861, p. 348 (PB L 78649, v. 6, p. 946); and CIOS XXIX-62, pp. 77-78 (PB L 949, v. 1, p. 350). The methods used by both Freudenberg (Target No. 1) and Knecht (Target No. 2) were similar but the former had much more fully mechanized the process, particularly in handling the slurry and laying down the sheets. See also BIOS Final Rept 1425, pp. 85-86, 157, (PB L 85610, listed in a forthcoming issue of this Bibliography).

*PB L 85594. PICKLES, A. S. Review of some of the German textile leather producing firms. (BIOS Final Rept 1538, Item 22) Jul 1946. 82 p. Price: Microfilm-$3.00 - Photostat-$9.00

In all thirteen targets were visited. The purpose of the visits was to investigate the production of combing leathers, along with other textile leathers, covering the tanning, currying and making-up of the finished products, including the plant and machinery used. An individual report is given for each plant. Thirteen illustrations covering machinery and tools used are included.

*PB L 81090. SPIERS, C. H. and others. The manufacture of mechanical and hydraulic leathers in Germany. (BIOS Final Rept 1447, Item 22, 31) Jun 1947. 82 p. Price: Microfilm-$2.00 - Photostat-$5.00

Seventeen factories were visited with the object of investigating the manufacture of hydraulic and mechanical leather products in Germany. Information was especially desired on the following points: Practice in the manufacture of dies,

molds, and rings and the material of which they are made; waxes used in molding; molding practice; special machines for mass production of certain goods; nature of leather used; labor conditions; and scientific control of operations. This report gives a summary of the survey and also contains individual reports from the firms visited. Price lists for various leathers and two sectional drawings are included.

LUMBER AND WOOD PRODUCTS

PB L 87907. BRUNE, JOHN. Yield and wood waste utilization in German hardwood plywood plants. (BIOS Final Rept 1536, Item 22). Mar-Apr 1947. 15 p. Price: Microfilm-$1.25 - Photostat-$2.00
Five targets were visited and the pre-war production, postwar operating conditions, raw material, yield, plywood production, methods, and equipment for each were investigated.

PB L 87927. COLLIE, G. A. and others. German manufacture of wood-waste board. (BIOS Final Rept 1526, Item 22). May 1947. 61 p. Price: Microfilm-$2.50 - Photostat-$7.00
Ten targets were visited. Several processes for the production of board-like materials from waste wood have been evolved in Germany. The term "wood-waste board" in this report includes "chipboard" and similar boards made from waste wood but does not include material known as "fiberboard" or "wallboard." Each target is reported individually. Drawings and photographs and two German pamphlets are attached.

PB L 81973. KOJIMA, TOSHIBUMI and others. Bark beetle epidemic in Japan. A preliminary report. (Supreme Commander for the Allied Powers. Natural Resources Sect Rept 90). Sep 1947. 19 p. Price: Microfilm-$1.25 - Photostat-$2.00
The report covers the following data: (A) history, (B) insects causing the damage, (C) characteristics of the epidemic, (D) analysis of the epidemic, and (E) prevention and control. Table 1 and Figure 1 provide a record of the damage. Figure 2 shows the present infected area, Figures 4-12 show beetles and life cycles. A list of Natural Resources Section Reports is attached.

PB L 87937. PERKINS, J. B. and others. German cork industry (natural and composition) for bottle closures, etc. (BIOS Final Rept 1540, Item 22). May-Jun 1947. 22 p. Price: Microfilm-$1.50 - Photostat-$3.00
Sixteen factories, two of which were manufacturers of cork-cutting machinery, were visited. Each is reported separately. Due to scarcity of material little manufacturing was in progress; however, there appeared to be sufficient machinery and technical skill to enable the industry to give a good account of itself providing material was made available. Substitutes were obviously uneconomic and unsatisfactory.

PB L 38195. SEBORG, R. M. and FLEISCHER, H. O. Firma Wilhelm Vogler Fassfabrik, plywood and container factory, Offenbach, Ger. (FIAT Evaluation Rept 87). Jul 1945. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Nothing of scientific interest seen at this plant.

*PB L 87925. THOROOOD, A. L. German wood wool building slab industry. Supplementary report. (BIOS Final Rept 1489, Item 22). Mar 1940. 71 p. Price: Microfilm-$2.75 - Photostat-$8.00
Details are reported of a new process for reducing the quantity of wood wool. It was stated that magnesium sulfate and dolomite were to be used as the binding agents, hydrogen peroxide and bleaching powder as the foaming agents, and an unspecified synthetic resin as the stabilizer. BIOS Final Rept 956 (PB L 75867, v. 5, p. 869, this Bibliography), should be referred to while reading this present report. The order of reporting factories is the same in both reports.

MACHINERY (EXCEPT ELECTRICAL)

PB L 70495. GUTEHOFFNUNGSHÜTTE OBERHAUSEN A. G., WERK STERKRADE, OBERHAUSEN, GERMANY. Turbo-compressor. (FIAT Microfilm Reel W 6, Frames not numbered) 1942-1943. 48 f. Price: Microfilm-$1.25 - Enlargement print-$5.00
This microfilm reel was prepared by FIAT investigators in Germany. The film contains an index listing 32 assembly and detail drawings of an 11-stage centrifugal compressor designed for a capacity of 80 to 96 thousand cubic meters per hour of free air and a final pressure of 8 atmospheres. Cooling takes place after the 3d, 6th and 9th stages. A pressure-volume diagram for the type TKi compressor is included with the drawings. The titles of these drawings are translated in the index. No explanatory text is included. Legend on drawings is in German.

PB L 70490. GUTEHOFFNUNGSHÜTTE OBERHAUSEN A. G., WERK STERKRADE, OBERHAUSEN, GERMANY. Turbo-compressor for Ammoniakwerk Merseburg G.m.b.H. (FIAT Microfilm Reel H 100, Frames 137-160) 1939-1942. 24 f. Price: Microfilm-$1.00 - Enlargement print-$2.50
This is a film of the correspondence and engineering data including the drawings of a turbo-compressor for the Ammoniakwerk Merseburg G.m.b.H. The compressor was designed to compress 12,000 cubic meters per hour of hydrocarbon gas to 20 atmospheres. The compressor is driven by a live steam reaction turbine of 2710 H.P. at 3000 r.p.m. with a step up gearing to 6650 r.p.m. A longitudinal section drawing through the turbine and compressor, stuffing box, curves of steam consumption, power output and final pressure at various operating speeds are given. In German.

PB L 73267, PB L 70382 and PB L 70383. HARTEX G.M.B.H., MASCHINEN U. WERKZEUG FABRIK, BERLIN. Hartex centerless grinder, model BEF-1: Drawings. (FIAT Microfilm Reels J 206 to J 208 Frames 2425 to 3302A) 1931-1942. Prices for each reel are as follows:

PB No.	Reel	Frames	No. of Frames	Prices: Micro.	Enl. Print
L 73267	J 206	2425-2774C	877	$6.00	$88.00
L 70382	J 207	2775-3045	582	6.00	58.50
L 70383	J 208	3046-3302A	648	6.00	65.00

This is a continuation of drawings of the centerless grinder, Model BEF-1, made by the Hartex firm. For the previous drawings of this machine see Reels J 201 to J 205, PB's 73409 to 73413, as listed in volume 6, page 12, this Bibliography. The drawings are of attachments for special work such as brackets for grinding bars, gearing for grinding profiles, work catching boxes, wheel dressing devices, knock-off devices, etc. Drawings of machine parts, such as wheel spindles, spindle bearings, assembly drawings of the machine and of part groups, mostly of older date are included. There is no text accompanying these drawings and the legend thereon is in German.

Machinery (contd)

PB L 89865-PB L 89866. KIKAI SEISAKU SHINTO-SHA, TOKYO.
Mashinari (Machinery). Vol. 4, Nos. 1-6, 8-12; vol. 5, Nos. 1-12. 1941-1942. Paging and prices as follows:

PB No.	Volume	Number	Date	Pages	Prices: Micro.	Photo.
L 89865	4	1-6, 8-12	1941	1077	$7.00	$108.00
L 89866	5	1-12	1942	1140	7.00	114.00

These documents are bound volumes of a Japanese machinists' journal containing original articles and translated articles from German and American machinists' journals on machine manufacture, machine parts, machine tools, machine maintenance, etc. Translated articles from American publications include abstracts and full translations from the periodicals "American Machinist," "Machine Design," and "Product Engineering." Typical articles from Vol. 4 and 5: Notes on bearing removal; ball and roller bearings; milling machines; oxyacetylene flame hardening; care makes tools last longer; Allison engine production; how to make artillery cartridge cases; symposium of papers on machine tool practice; details of Germany's mass production fighter; the Messerschmitt 110; etc. In Japanese.

4

PB L 89078. KORBACHER, F. Flow and pressure conditions behind gas turbine guide vane ring with straight and curved blades. (AAF Translation 2741). Feb 1948. 69 p. Price: Microfilm-$2.50 - Photostat-$7.00
Flow and pressure conditions behind turbine stator with twist effect were calculated with respect to turbine stage having straight or twisted blades, with radial pressure gradient taken into consideration. Korbacher considers agreement between calculations and measurements as very good. Pressure and flow field behind stators were investigated as to magnitude and direction.

PB L 51505-T. KUHN, M. and PLATZ, H. Effect of operating temperature on piston rings cast from various alloys. (Caterpillar Tractor Co. Res Dept Translation 106). Oct 1947. 58 p. Price: Microfilm-$2.00 - Photostat-$4.00
Abstract of original German report is in v. 3, p. 949, this Bibliography. The report was translated by Kresge-Hooker Scientific Library.

PB L 88882. MARINE ENGINE INSPECTION, WILHELMSHAVEN. Tube failures of high pressure boilers. Vol. 1. 1942. 26 p. Price: Microfilm-$1.50 - Photostat-$3.00
This volume is intended to furnish chief engineers or machinists with a means of determining the types of damage to the tubes by personal inspection, without the aid of shipyards or other investigating agencies. By virtue of the pictures and descriptions, in the book, even the cause of damage may often be established. The volume is also to serve as a basis for the testing of tube samples. Photographs attached.

PB L 74130. PECHSTEIN, WALTER. Static calculation of a piston type gas holder of 72,500 cubic meters capacity. (FIAT Microfilm Reel CC 296, Frames 1-131) Jul 1946. 131 f. Price: Microfilm-$2.25 - Enlargement print-$13.50
This is an original German manuscript which was translated and incorporated into FIAT Final Report 1054 by Herman Liese. PB 81820, volume 7, page 323 this Bibliography, entitled German Design Practice for Large Dry Type Gasholders, An Evaluation. (With translation by H. H. Houk.)

MEDICAL RESEARCH AND PRACTICE, INCLUDING CLINICAL APPLICATION OF DRUGS AND PHARMACEUTICALS

PB M 84185. ERLANGEN, GERMANY, UNIVERSITY. A collection of doctors' theses. (FIAT Microfilm Reel I-250, Frames 2307-3252) 1943. 946 f. Price: Microfilm-$7.00 - Enlargement print-$96.00.
The theses reproduced on this FIAT microfilm reel and listed below will be available as enlargement prints. Please include PB and frame numbers when ordering individual items from this reel. In German.

Frame	Title	Price
2307-2369 PB M 84185	Stenosis resulting from aspirated foreign bodies and the difficulties in confirming them by differential diagnosis. 1943. In German.	$8.00
2370-2404 PB M 84185	The differential diagnosis of schizophrenia and the twilight state of epilepsy. By Xaver Staudacher. n.d. In German.	5.00
2405-2438 PB M 84185	Various analgetic remedies compared on rats by means of a simple, electrical stimulating method. By Heinrich Sollner. n.d In German.	5.00
2439-2501 PB M 84185	Studies on the sleep of non-mammalian animals. By Hans Siegert. n.d. In German.	9.00
2502-2543 PB M 84185	Functional tests of the liver with special consideration of the p-hydroxyphenyl pyruvic acid test. By Ludwig Seyfert. n.d. In German.	6.00
2544-2579 PB M 84185	Acute perilous inflammation processes of the jaws and their surroundings. By Harry Schorn. n.d. In German.	5.00
2580-2608 PB M 84185	Application of permanent baths for the treatment of decubital processes in the back. By Liesolotte Peukert. n.d. In German.	4.00
2609-2649 PB M 84185	Genuine and false cases of Schlaffer's tumors. By Rudolf Eugen Preiss. n.d. In German.	6.00
2650-2684 PB M 84185	Fractures of the shoulder blade and therapeutic results in miners. By Lothar Pierschke. n.d. In German.	5.00
2685-2711 PB M 84185	Contribution to skin diseases appearing frequently during the war, and their importance. By Hermann Niklas. n.d. In German.	4.00
2712-2737 PB M 84185	Thermoresistance of the agglutinins in patients afflicted with spotted fever. By Hans Kane. n.d. In German.	4.00
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Medical Research (contd)

Heinz Kornacher. n. d. In German. 5.00

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2927-2950 PB M 84185 Contribution to the etiology of neuritis retrobulbaris. By Fred Himmelsoher. n.d. In German. 4.00

2951-3085 PB M 84185 Symptomatic psychoses. By Wilhelm Herbolsheimer. n.d. In German. 15.00

3086-3138 PB M 84185 The sarcoma of the female mammary gland. By Ernst Friedrich Griebel. n.d. In German. 7.00

3139-3162 PB M 84185 Contribution to the knowledge of the adenomata of the salivary gland. By Helmut Greiselmayer. n.d. In German. 6.00

3163-3214 PB M 84185 A new finger splint. By Kurt Grasser. n.d. In German. 5.00

3215-3262 PB M 84185 The genesis of judgements of temperature by touching one's own forehead. By Liesolotte Goth. 1943. In German. 5.00

MINERALS AND MINERAL PRODUCTS

*PB L 88529. DAVIDSON, MARION and ROWE, FRED. Dachziegelwerke Ergoldsbach A.G., manufacture of brick, Neufahrn, Ger. (FIAT Evaluation Rept 23). Jul 1945. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Brief description of the plant and product is given. Machinery in excellent shape.

*PB L 88161. DODD, A. E. and others. Interrogation of Josef Reismann: Dolomite. (BIOS Interrogation Rept 617). Jul 1947. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
In the opinion of the investigators Reismann had nothing to add to the knowledge of dolomite as a refractory material.

PB L 89018. WEBER, B. C. Ceramic materials for some special applications. (AAF Tech Rept 1163). Feb 1948. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
Special ceramic materials and masses were produced by Siemens for the Electrotechnical Industries. Ceramic transformer tanks 5 ft 3 in. in diameter, weighing 4410 lb, and large pin-type insulators 13 ft in height and 3 ft 4 in. in diameter, were produced in whole bodies. Comparison is made of German and American porcelains for high voltage. Generator nozzles of silicon carbide with clay binder, fired at 1400° C, were operated at temperatures of from 1200 to 1400° C for a service life of from 1000 to 2000 hours. Turbine blades produced in laboratory quantities from various grained mixtures of 75% silicon carbide and 25% clay binder were fired in the usual industrial kilns. Test results were not available, since all testing was conducted at the Hermann Goering Institute (LFA).

*PB L 87882. WILSON, J. N. and PRYOR, E. J. Grinding and treatment of minerals. (BIOS Final Rept 1356, Item 21). Apr 1946. 92 p. Price: Microfilm-$3.25 - Photostat-$10.00
The object of this investigation was to view a cross section of the grinding and pulverizing industry in Germany and of the various ancillary processes which appertain to it, more especially as regards the treating of minerals. Drawings, graphs, photographs and tables are attached.

PHYSICS

Nuclear

PB L 88563. ARGONNE NATIONAL LABORATORY. Fast linear amplifier (model B-3). (Atomic Energy Commission Rept MDDC-1284). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
A circuit diagram.

PB L 88560. ARGONNE NATIONAL LABORATORY. 1500 volt supply - negative or positive. (Atomic Energy Commission Rept MDDC-1290). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Circuit diagram.

PB L 88562. ARGONNE NATIONAL LABORATORY. Linear amplifier - model B-1, model B-4 (same diagram). (Atomic Energy Commission Rept MDDC-1285). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Circuit diagrams.

PB L 88564. ARGONNE NATIONAL LABORATORY. Model B-4 linear amplifier. (Atomic Energy Commission Rept MDDC-1286). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
A circuit diagram.

PB L 88566. ARGONNE NATIONAL LABORATORY. 3-fold C.N. coincidence unit. (Atomic Energy Commission Rept MDDC-1289). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Circuit diagram.

PB L 88561. ARGONNE NATIONAL LABORATORY. Triple pulse generator (with variable delay). (Atomic Energy Commission Rept MDDC-1287). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
A circuit diagram.

PB L 88565. ARGONNE NATIONAL LABORATORY. 2-fold C.N. coincidence unit. (Atomic Energy Commission Rept MDDC-1288). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Circuit diagram.

PB 88559. ARNOLD, J. R. and SUGARMAN, N. Short-lived isomeric states of Se^{83} and Ge^{77}. (Atomic Energy Commission Rept MDDC-837). Mar 1947. 29 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00)
The presence of a short-lived state of Ge^{77} decaying by β^- emission to 40h As^{77} has been shown by As extractions of Ge sulfide solutions irradiated with neutrons. The cross-section for formation of the short-lived state was found to be about 10 per cent larger than that of the 12h Ge^{77}. A short-lived Ge activity was found by irradiating GeS_2 with neutrons for 20 sec. and measuring the activity through Al absorbers. The half-life was determined to be 59±2 sec. and the β energy, 2.8 Mev. The agreement between the cross-sections of the 59s Ge and the 40h As^{77} from the short-lived Ge^{77} makes it probable that the 59s Ge is genetically related to the 40h As^{77}. The presence of the 59s Ge^{77} activity decaying by β^- emission to 40h As^{77} resolves the difficulty of the apparently high "independent" yield of As^{77} in fission. Published in the Journal of Chemical Physics, v. 15, p. 703, Oct.1947.

PB L 88567. ARNOFF, S. and others. Distribution of C^{14} in photosynthesizing barley seedlings. (Atomic Energy Commission Rept MDDC-965). Apr 1947. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
As a part of a program for the biosynthesis of carbon-labeled biologically important compounds, especially sugars, exploratory work has been performed on the assimilation of radioactive carbon dioxide in the light by young barley plants. A table gives the activity measurements of the various fractions. Published in Science, v. 105, pp. 664-665.

PB L 88568. ARONOFF, S. and others. Distribution of labeled carbon in sugar from barley. (Atomic Energy Commission Rept MDDC-966; BC Rept 49). Apr 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The preparation of radioactive sugars from barley seedlings which assimilated $C^{14}O_2$ is described in PB 88567 (MDDC 965). It is of importance to know the distribution of the labeled carbon in the sugars formed under these conditions. The results indicate that the carbon distribution in the trioses is not uniform, and that the activity is greatest in the terminal carbon atoms which eventually become carbons 3 and 4 in the hexose. Published in the Journal of Biological Chemistry, v.169, No. 2.

PB L 89689. ARROL, W. J. Preparation of a neutron standard. Interim report. (Canada Natl Res Council Atomic Energy Project Rept 1581; Rept MC 73). Jul 1944. 20 p. Price: Microfilm-$1.25 - Photostat-$2.00
It had been hoped that a neutron standard might have been prepared with an accuracy of 0.5 - 1%; the standardization to be made by means of helium measurement based on two independent nuclear reactions, namely:

$$^{9}_{4}Be + \gamma \longrightarrow {}^{4}_{2}He + {}^{1}_{0}n$$

and:

$$^{10}_{5}B + {}^{1}_{0}n \longrightarrow {}^{7}_{3}Li + {}^{4}_{2}He.$$

Considerable improvements in helium technique and chemical manipulation would be necessary in order to obtain the required accuracy with amounts of helium of the order of 2×10^{-7} ccs. These were all satisfactorily achieved, but progress was so impeded by the lack of high quality stopcocks of soft glass and by bad vibration conditions, that it was decided to abandon the research in Montreal and finish it in England, where supplies are available and a good high vacuum laboratory is already set up.

PB L 88569. AYRES, JOHN A. Purification of zirconium by ion exchange columns. (Atomic Energy Commission Rept MDDC-1026). Nov 1947. 11 p. Price: Microfilm-$1.25 Photostat-$2.00
A method has been developed for purification of zirconium by ion exchange columns. In this procedure the zirconium is present in the colloidal form and is not adsorbed by the resin while the impurities which are present as positive ions are removed by ion exchange. This method is rapid and easily adaptable to large scale procedures. Results of several experiments are given to show the results of purification of zirconium from iron, titanium, beryllium and rare earths. A procedure is described for obtaining a purified solution of zirconium salt from a typical ore. Published in the Journal of the American Chemical Society, v. 69, No. 11.

PB 88570. BEEMAN, W. W. The neutron scattering cross section at the cadmium resonance. (Atomic Energy Commission Rept MDDC-1291). Jun 1947. 4 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00)
The scattering cross section at the cadmium resonance has been measured using a beam of neutrons from a single crystal monochomator. The energy spread of the neutrons was about one quarter of the width of the resonance. A total of 5372 counts from the cadmium and 5040 background counts were recorded during equal counting times. An equation is given to relate the quantities in question. Published in the Physical Review, v. 72, pp. 986-987.

PB L 89696. BEWICK, H. A. and others. Determination of microgram amounts of boron in calcium and magnesium metals. (Canada Natl Res Council Atomic Energy Project Rept 1594; Rept MX 228). Feb 1946. 8 p. Price: Microfilm-$1.00- Photostat-$1.00
The calcium hydroxide and magnesium metal were dissolved in boron free hydrochloric acid prepared by passing hydrogen chloride into distilled water. The solutions made slightly alkaline were evaporated and the residues dissolved in methanol. The boron was distilled as methyl borate from dilute hydrochloric acid solution and the boron was estimated colorimetrically with turmeric. A method is given for the determination of boron in dilute hydrochloric acid.

PB L 88571. BONHAM, K. and others. Lethal effect of X-rays on four marine micro-plankton organisms. (Atomic Energy Commission Rept MDDC-1158). Sep 1947. 15 p. Price: Microfilm-$1.25 - Photostat-$2.00
Literature on the effect of X-rays on bacteria, yeasts, and Protista is summarized in a table showing that the average immediately lethal dose is 595,000 roentgens (20,800 to 1,250,000) and that the average dose capable of stopping growth or cell division of these micro-organisms is 93,000 r (12,000 to 400,000). In this experiment vialed samples of Chlorella sp., Nitzschia closterium, a carteriid, and another mastigophoran (unidentified, brown) were each subjected to 5 exposures from 1000 r to 100,000 r. Numbers of organisms per unit volume of culture were counted using ruled blood counting chambers. Immediate immobilization of the brown mastigophoran was 50% effective at 50,000 r, and 100% at 100,000 r. Counts for an organism were comparable only with other counts for different irradiation samples of the same organism on the same date. Counts over a period of 4 months were most nearly as might be expected in the case of Chlorella where the concentration of individuals remained inversely proportional to the amount of irradiation for practically the entire time, except in the case of the 1000 r sample which exceeded one of the two controls. Nitzschia counts in the higher irradiations decreased earlier and more drastically than did those of Chlorella, but later these more heavily irradiated samples gave higher counts than the lower dosages. Counts of the two Mastigophora were arranged erratically with only a general tendency for count

to be inversely related to exposure. In no case did a sample count drop to and remain at zero. Published in Science, v. 106, No. 2750.

PB L 88573. BOYD, G. E. and others. The exchange adsorption of ions from aqueous solutions by organic zeolites - I. Ion-exchange equilibria. (Atomic Energy Commission Rept MDDC Rept 708). Nov 1947. 38 p. Price: Microfilm-$1.75 - Photostat-$4.00

The equations describing base-exchange reactions may be formulated either on the basis of an adsorption mechanism or according to the law of mass action. These relations can be shown to be entirely equivalent formally. Results from experimental measurements of the standard free energy of formation, ΔF°_{MR}, of the metallic zeolite salt gave the following order of adsorption affinity: $La^{+++} > Y^{+++} > Ba^{++} > Cs^{+} > Rb^{+} > K^{+} > Na^{+} > Li^{+} > H^{+}$. Adsorption affinites were shown to be determined chiefly by the magnitude of the charge and the hydrated radius of the ions in solution. Published in the Journal of the American Chemical Society, v. 69, No. 11. For parts II and III, see PB L 88572 and PB L 88574.

PB L 88572. BOYD, G. E. and ADAMSON, A. W. The exchange adsorption of ions from aqueous solutions by organic zeolites - II. Kinetics. (Atomic Energy Commission Rept MDDC-1075). Nov 1947. 50 p. Price: Microfilm-$2.00-Photostat-$5.00

Equations capable of describing the rate of the exchange adsorption of the alkali metal cations by the resinous zeolite Amberlite IR-1 have been formulated on the basis of a diffusion mechanism or according to a bimolecular chemical rate process based on the law of mass action. The experimental results have revealed two rate processes governing the adsorption velocity: (a) With solutions 0.1 M in total electrolyte or greater the rate was controlled by diffusion in and through the adsorbent particle and could be described by an equation containing a single constant, B, whose magnitude was determined by the ratio of the internal diffusion constant, Di, for the particle to the square of the particle radius. (b) With solutions 0.003 M or less the rate was limited by diffusion through a liquid film at the periphery of the particle, and could be described also by an equation containing a single constant, R, whose magnitude was determined by the ratio, $D_l/r_o \Delta r_o K$, where D_l was the diffusion constant for the adsorbing ion in the mixed electrolyte, Δr_o, the film thickness parameter, and K, the equilibrium distribution ratio. The primary factors determining the nature of the rate controlling mechanism were shown to be distribution constant, K, and the particle radius, r_o. Large values of K, and/or small values of r_o favor a rate determined by film diffusion, if the temperature and flow rate are kept constant. Published in the Journal of the American Chemical Society, v. 69, No. 11.

PB L 88574. BOYD, G. E. and others. The exchange adsorption of ions from aqueous solutions by organic zeolites. III. Performance of deep adsorbent beds under non-equilibrium conditions. (Atomic Energy Commission Rept MDDC-1113). Nov 1947. 44 p. Price: Microfilm-$2.00 - Photostat-$5.00

The transfer theory of Anzelius and Schumann has been reformulated using a first order rate equation found to apply in the description of the adsorption velocity in single-stage experiments. The dependence of the rate constant on particle size, flow rate and macro-component concentration is made explicit in this modified theory. In principle, this theory should permit the prediction of the behavior of deep adsorbent beds reacting under non-equilibrium conditions to be made in terms of the rate and equilibrium constants for the system. An experimental method for the continuous recording of the concentration history of the effluent from a deep bed has been described utilizing radioactive isotope tracer equipment and techniques. The employment of these methods for the control of continuous flow type processes on a much larger scale should be of value. The experimental concentration histories were observed to possess the same shape as the curves predicted by theory over a wide range of relative concentration. The observed dependence of the rate constant on bed depth was not anticipated from the theory, although the variation with flow rate and macro-component concentration were in fair accord. Good agreement between the values of the distribution coefficient determined by the application of the theory to the adsorption column data and by independent equilibrium experiments was found. However, the rate constants estimated from the deep bed performances were approximately five to ten-fold smaller than those measured by a shallow-bed technique. Much of this difference was attributed to the large difference in flow rate in the two types of experiments. Application of the transfer theory procedure to column desorption data was shown to be possible. A dependence of the desorption rate on flow and on macro-component ion concentration was indicated. Published in the Journal of the American Chemical Society, v. 69, No. 11.

PB L 88575. BOYD, GEORGE A. The physical principles and techniques of autoradiographs. (Atomic Energy Commission Rept MDDC-1226). Sep 1947. 19 p. Price: Microfilm-$1.25 - Photostat-$2.00

The purpose of autoradiographic research is the location of a particular atom in a gross or histological section. In autoradiographs the alpha particles and beta particles pass from the object to the photographic emulsion and react in a similar manner to make the silver bromide grain developable. A discussion of methods and techniques is given. The report covers research at the Atomic Energy Project, University of Rochester, and was given oral presentation at a meeting of the Biological Photographic Association.

PB 88576. BRILL, T. and LICHTENBERGER, H. V. Neutron cross section studies with the rotating shutter mechanism. (Atomic Energy Commission Rept MDDC-968). Oct 1947. 42 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y.

It has been possible to extend the usefulness of the rotating shutter mechanism of Fermi, Marshall, and Marshall for velocity selection of neutrons by increasing the number of photoelectrically activated gate circuits. With the modifications here described data can be obtained simultaneously in six well resolved velocity intervals. In this way the cross sections of gold, gadolinium, and dysprosium have been measured as a function of velocity for low energy neutrons. Nine drawings and diagrams are included. Published in the Physical Review, v. 72, No. 7.

PB L 88158. BRITISH INTELLIGENCE OBJECTIVES SUB-COMMITTEE. Interrogation of Dr. Ronald Richter: The activation of material by atomic physical means. (Interrogation Rept 620). May 1947. 14 p. $1.25 - Photostat-$2.00

The following headings are covered: (1) the activation of catalytically active border surfaces, (2) control of catalytic activity, (3) image converter to see catalytic activity, (4) separation of hydrogen isotopes by activated border surfaces, (5) light weight storage battery, and (6) activation of atomic nuclei.

PB 88577. BURFORD, W. B., III. Pilot plant synthesis of C_7F_{16}, C_8F_{16} and fluorocarbon oils boiling up to 350° C. (Atomic Energy Commission Rept MDDC-500). 1947. 65 p. (Available from the American Chemical Society, 1155 16th St., N. W., Washington, D. C., $0.75).

The design, construction, and operation of a pilot plant for the production of perfluorocarbons by the CoF_3 process has been described in detail. The process consists of passing vaporized hydrocarbon over CoF_3 powder at suitable temperatures, after which the resulting CoF_2 is regenerated with elementary fluorine. The reacting equipment, fluorine cells, disposal system, and the production recovery systems have

been described in detail, and typical operational characteristics are outlined. A flow sheet has been furnished to show schematically the interconnection of the various units. A brief description has been included of the ventilation system for the plant, operating personnel required to run it, and the normal output. In addition a brief characterization of some typical perfluorocarbons produced by the unit has been included, with some physical properties of each material. Published in Industrial and Engineering Chemistry, v. 39, pp. 319-329.

PB L 88578. CALVIN, M. and TOLBERT B. Synthesis of C^{14} labeled organic compounds. (Atomic Energy Commission Rept MDDC-1182). Jul 1947. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
A set of charts constitute this progress report on the synthetic work with C^{14} carried on in the Bio-Organic Division of the Radiation Laboratory, University of California, Berkeley. The work of the entire synthetic group is represented.

PB L 88580. CLINTON LABORATORIES. Photographs of health physics instruments used at Clinton Laboratories. (Atomic Energy Commission Rept MDDC-1397). Jun 1947. 29 p. Price: Microfilm-$1.50 - Photostat-$3.00
36 photographs are included in the portfolio. A variety of meters, detectors, counters, protective clothing and other equipment is pictured.

PB L 88579. CLINTON LABORATORIES. Remote control pipette, prints D2117, D2118, D2119, D2120 and E2020. (Atomic Energy Commission Rept MDDC-1293). 1947. 4 p. Price: Microfilm-$2.00 - Photostat-$5.00
Assembly and detail drawings for remote control pipette at Building 706-D, Clinton Laboratories are included.

PB L 88581. COPP, D. H. and others. The deposition of radioactive metals in bone as a potential health hazard. (Atomic Energy Commission Rept MDDC-455). May 1946. 15 p. Price: Microfilm-$1.25 - Photostat-$2.00
The metabolism of bone was investigated to determine the factors concerned in the absorption and deposition of these elements in the skeleton and the precise sites of localization. The chronic elimination of these radioactive materials was studied in rats, and the effects of the standard procedures used in treating chronic radium poisoning were compared. Finally, a possible mechanism for reducing the toxicity of the plutonium deposits in the bone was investigated. Work performed at Crocker Radiation Laboratory, University of California. Published in the American Journal of Roentgenology and Radium Therapy, v. 58, p. 10.

PB L 88582. CRANDALL, H. W. The formula and structure of uranyl ion. (Atomic Energy Commission Rept MDDC 1294). Jun 1947. 29 p. Price: Microfilm-$1.50 - Photostat-$3.00
Although uranyl ion has been shown to be a doubly positive charged ion in dilute acid solution by previous investigations no evidence has been obtained to distinguish between the two possible ions UO_2^{++} and $U(OH)_4^{++}$. The exchange of oxygen between uranyl chloride and water has been measured in dilute hydrochloric acid solution using oxygen 18 as a tracer and analyzing with a mass spectrometer constructed by the author. It was found that in 0.1N to 0.65N HCl the formula of uranyl ion is UO_2^{++}. The uranyl oxygen bonds are covalent in nature. Further, it was established that UO_2^{++} was a covalently bonded unit in crystalline uranyl chloride. The Raman spectra of uranyl chloride and uranyl perchlorate was measured. The spectrum of uranyl perchlorate is closely similar to that of uranyl chloride and those of other uranyl salts previously investigated. No positive conclusion with the regard to the configuration of uranyl ion in solution was reached. A discussion of the available data is included in the text. This paper is based on work performed by the Radiation Laboratory, University of California, Berkeley.

PB L 89692. CRANSHAW, T. E. A 20-millisecond period alpha decay in the 4n + 1 family. (Canada Natl Res Council Atomic Energy Project Rept 1584; Rept MP 162). Jul 1946. 14 p. Price: Microfilm-$1.25 - Photostat-$2.00
Experiments in the time distribution of α particles from the 4n + 1 family are described. A triggered oscilloscope system with a camera was used to measure a short period, and by measuring the amplitude of the pulses, this period was assigned to the element 85^{217}. The value obtained for the half-life is 21 $\pm$ 3 milliseconds.

PB L 88583. CRAVER, F. N. The effect of X-rays on the in vitro motility of feline intestine. (Atomic Energy Commission Rept MDDC-551). Sep 1947. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
This paper reports experiments designed to elucidate the possible effects of X-ray exposure in vitro on the motility of isolated strips of small intestine from the cat. The exposure in vitro to doses of soft X-ray varying from 1000 to 10,000 r of strips of small intestine from the cat did not appear to influence significantly their kymographically recorded motility. The paper is based on work done at the University of Rochester and was published in the American Journal of Roentgenology, v. 58, No. 3.

PB L 88584. DAUBEN, W. G., and others. Techniques in the use of carbon fourteen. (Atomic Energy Commission Rept MDDC- 769; BC Rept 40). Jan 1947. 14 p. Price: Microfilm-$1.25 - Photostat-$2.00
A study was made of three important phases of tracer work: The incorporation of the tracer atom into the organic molecule; the conversion of an organic substance to a form suitable for isotope analysis; and the construction and use of equipment employed to determine the isotopic concentration of such compounds. Experimental procedures for carbonation of the Grignard reagent, construction of the induction stirrer, combustion of the organic compound, and counting method are described. The paper is based on work performed at the University of California and was published in Analytical Chemistry, v. 19, No. 11.

PB L 89697. DEMERS, PIERRE. Energy distribution of neutrons from Ra-Be mixed source. (Canada Natl Res Council Atomic Energy Project Rept 1597; Rept MP 204). Nov 1946. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
357 proton recoils in a photographic emulsion from a Ra-Be mixed source were measured. The effect of the thick lead shielding used was estimated and corrected for by tests using Po-Be source. The energy distribution from the Ra-Be source is given.

PB 88586. FERMI, E. and MARSHALL, L. Spin dependence of scattering of slow neutrons by Be, Al, and Bi. (Atomic Energy Commission Rept MDDC-844). Sep 1947. 9 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Some information has been obtained on the spin dependence of scattering of slow neutrons by Be, Al, and Bi by measuring the scattering cross section for filtered neutrons. The re-

sult is that in none of these three cases does the sign of the scattering length change when the spin orientation is changed. But in the case of Be and Bi the magnitude of the scattering length for one spin orientation may be up to twice as great as that for the other spin orientation, and in the case of Al the variation may be by a factor of 3. Published in the Physical Review, v. 72, No. 5.

PB 88585. FERMI, E. and others. A thermal neutron velocity selector and its application to the measurement of the cross section of boron. (Atomic Energy Commission Rept MDDC-771). Aug 1947. 13 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Some typical examples are given of the variations of average velocity of slow neutrons using different moderators as indicated by changes in the apparent cross section of boron. Since boron is often used as a standard substance in slow neutron measurements its cross section has been determined also using monochromatic neutrons obtained with a velocity selector of new design operated in connection with the thermal column of the Argonne graphite pile. Within the experimental errors of the method the cross section of boron varies as the 1/v law and the measured cross section is $703 \times 10^{-24} cm^2$ per atom for neutrons of velocity 2200 meters per second. Published in the Physical Review, v. 72, p. 193-196.

PB 88587. FERMI, E. and others. The transmission of slow neutrons through microcrystalline materials. (Atomic Energy Commission Rept MDDC-1184). May 1947. 18 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The transmission of monochromatic slow neutrons through microcrystalline Be and BeO has been determined. The source of neutrons was the Argonne heavy water pile. These neutrons were monochromatized by means of a mechanical velocity selector for low energies and a neutron crystal spectrometer for higher energies. The results are in excellent agreement with the theory of elastic scattering from crystals. It is found by comparison of the results on BeO with the theory that the scattering amplitudes of Be and O have the same sign. This method may be used to determine the relative scattering phases of other pairs of nuclei which can be combined to form a crystalline material. The sample must consist of crystals smaller than a micron in linear dimensions. Other possible sources of disagreement between theory and experiment are discussed in Section 5. Two cross-section diagrams are appended. Published in the Physical Review, v. 71, No. 9.

PB 88588. FINKELSTEIN, R. J. Scattering of neutrons in polycrystals. (Atomic Energy Commission Rept MDDC-845). Nov 1947. 17 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Although elastic and first order inelastic cross sections for a neutron against a Debye crystal have already been determined, expressions for higher order inelastic collisions have not been calculated, and would be very complex for the Debye model. The calculation of the total inelastic cross section involving the emission of an arbitrarily large number of phonons is here presented for a neutron against an Einstein polycrystal. The result, as one would expect, is essentially the same as that given by Fermi for amorphous scatterers, except at high neutron energies where we have calculated the cross section for the ejection of the struck nucleus from its lattice. The coherent elastic cross section is also determined; it is important for energies as high as 1 volt, and does not differ appreciably from that previously calculated for a Debye crystal. The total cross section, the sum of the coherent and incoherent parts, is compared with the experimental data on beryllium. Published in the Physical Review, v. 72, pp. 907-913.

PB 88589. FITCH, V. and TITTERTON, E. W. A laboratory oscilloscope. (Atomic Energy Commission Rept MDDC-1033; LADC Rept 394). Feb 1947. 21 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The Laboratory Oscilloscope is designed primarily for use in the nuclear physics laboratory but is a versatile instrument well suited to general circuit research. It contains a sweep generator with writing speeds ranging from 8 inches per microsecond to 1 inch per millisecond. The sweep is initiated by a voltage amplitude discriminator which may be triggered by: (a) an internal trigger generator operating at variable repetition rates, (b) a jitter-free delayable trigger which may be generated at any time from minus 2 to plus 400 microseconds with respect to a fixed trigger from the master generator, (c) from any arbitrary signal greater than 5 volts, (d) any input to the signal amplifier larger than 0.2 volts. A high fidelity delay line is incorporated in the amplifier circuit so that the sweep may be initiated by the input signal to the amplifier before the signal appears on the scope plates. A 1 volt input to the amplifier will give a 1 1/2 inch screen deflection with a minimum rise time of 0.15 microseconds. The trigger generator, which starts the delay circuits, may be triggered externally by pulses of 15 volts amplitude or more. Sufficient voltage is applied to the type 5CP11 scope tube to permit photography of transients with writing speeds of 3 inches per microsecond using a camera with an F:2 lens opening and Ansco Fluorapid film or Eastman 103-0 plates. Published in the Review of Scientific Instruments, v. 18, p. 821.

PB L 88590. FONTANA, B. J. Kinetics of the decomposition of tri-valent uranium ion in aqueous solution. (Atomic Energy Commission Rept MDDC-1053; BC Rept 79). Aug 1947. 11 p. Price: Microfilm-$1.25 - Photostat-$2.00
A brief preliminary study of the rate of oxidation of trivalent uranium ion in aqueous $HClO_4$ - $LiClO_4$ solutions (in the absence of oxygen) was made. The reaction was followed spectrophotometrically. The reaction was found to be unimolecular with respect to U^{+3} and independent of the H^+ concentration (from 0.05 to 5.0 m H^+). A 16-fold increase in rate is observed, however, on increasing the ionic strength from $\mu = 0.5$ to 5.0. Based on work performed at the Radiation Laboratory, University of California, Berkeley.

PB 88591. FOWLER, J. L. and ROSEN, L. Energy distribution of the fragments resulting from the fission of U^{235} and TH^{232} by slow and by fast neutrons. (Atomic Energy Commission Rept MDDC-945; LADC Rept 336). Nov 1946. 20 p. (Available from the American Institute of Physics, 57 East 55 St., New York, N. Y., $1.00).
The distribution of energies of the fragments from 235 fission produced by slow and by fast neutrons were compared. Energy was determined by using a ten-channel amplitude discriminator to analyze pulses from a Frisch-grid ionization chamber. No difference was found outside the experimental error. The energy distribution of the fragments from thorium fission was also determined. The high-energy tails of the distributions were especially investigated for the purpose of detecting the occurrence of triple fission. This indicated a negative result. A possible correlation between the most probable mode of disintegration of the nucleus and its atomic number suggests itself. Graphs and tables are included. Published in the Physical Review, v. 72, No. 10.

PB L 88592. GORDON, E. Vacuum melting and casting of beryllium. (Atomic Energy Commission Rept MDDC-1076). Sep 1945. 14 p. Price: Microfilm-$1.25 - Photostat-$2.00
Methods are given for melting and casting Be into cylindrical shapes from 1 to 4 1/2 inches in diameter. Mold composition (BeO) and design which give desired results are described, but further research is necessary. Voltages required for radiographing various thicknesses of Be are given. Diagrams are included. Published in Metal Progress, v. 52, pp. 387-390.

PB 88593. HAGEMANN, F. and others. The 4n + 1 radioactive series: The decay products of U^{233}. (Atomic Energy Commission Rept MDDC-1186). 1947. 3 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
This report, prepared at the Metallurgical Laboratory, University of Chicago, tabulates decay products of U^{233}, together with their radioactive properties. The "neptunium" series or family is suggested as the name for the 4n+1 radioactive decay family. Published in the Physical Review, v. 7, p. 252.

PB 88594. HARRIS, S. P. and others. Resonance scattering of neutrons by cobalt. (Atomic Energy Commission Rept MDDC-1299). Jul 1947. 4 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The resonance in cobalt near 115 ev. is found to be predominantly scattering. According to the Breit-Wigner equation, if the neutron width is considerably greater than the gamma width of the level, then for a resonance of 115 ev. for cobalt of spin 7/2, the peak scattering cross section should be either 10,000 or 13,000 barns (10^{-24} x cm^2/atom) depending on the resulting spin of the compound nucleus. Results of experiments indicate that the resonance cross section is at least 5000 to 6000 barns and may be as high as one of the theoretical values above, and that it is actually a scattering resonance. Published in the Physical Review, v. 72, No.9.

PB 88595. HAVENS, W. W., JR. and others. Interaction of neutrons with electrons in lead. (Atomic Energy Commission Rept MDDC-1187). Jun 1947. 9 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The upper limit for the neutron electron interaction can be greatly reduced by considering the interaction of slow neutrons with atoms. This consideration can be greatly extended by considering the interference of the wave scattered by the nucleus with the wave scattered by all of the electrons in the atom. To study this effect the total cross section of solid and molten lead has been measured as a function of the wave length of the incident neutrons using the neutron spectrometer Published in the Physical Review, v. 72, No. 7.

PB L 89690. HEAL, H. G. Electrochemical equilibria and electrode reactions in non-complex aqueous solutions of uranium salts. (Canada Natl Res Council Atomic Energy Project Rept I582; Rept MC 95). Oct 1944. 85 p.
Price: Microfilm-$3.00 - Photostat-$9.00
The literature dealing with uranium electrochemistry is critically reviewed. A series of new experiments employing the polarographic technique is described, and hypotheses are advanced, upon which these and the older results can be explained. The existence of an unstable ion of pentavalent uranium, UO_2^+, is strongly suggested by the evidence. Assuming this, an attempt is made to provide a quantitative theoretical explanation for the Becquerel Effect, which is applied both to the older experimental data and to some new figures. Proposals are made for future work.

PB 88598. HUGHES, D. J. and EGGLER, C. Cloud-chamber energy measurement of photo-neutron sources. (Atomic Energy Commission Rept MDDC-1082). Jun 1947. 16 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The energy distributions of the neutrons from several photoneutron sources have been measured by means of the range distribution of recoil protons produced in a hydrogen-filled cloud-chamber. It is shown that slowing-down in the source itself produces a broad spread in energy instead of the almost mono-energetic spectrum to be expected from a single γ-energy. The values of the mean neutron energy, E, and the maximum energy, E_M, for the sources measured are tabulated. As the E_M values should be directly related to the energies of each of the γ sources, they are compared to the γ energies as reported by different observers for each source. Published in the Physical Review, v. 72, pp. 902-907.

PB 88597. HUGHES, D. J. and others. Formation and properties of radioactive lithium. (Atomic Energy Commission Rept MDDC-1120). Apr 1947. 6 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
In view of the uncertainty concerning the reaction by which Li^8 is formed, some results are listed which were obtained using the deuterium moderated pile at the Argonne Laboratory during the spring of 1945. It is shown quite definitely that the 0.89 sec activity is Li^8 formed by the $Li^7(n,\gamma)$ reaction. Published in the Physical Review, v. 72:7, pages 646-647.

PB 88602. INGHRAM, M. G. and others. Activities induced by pile neutron bombardment of samarium. (Atomic Energy Commission Rept MDDC-672). 1947. 3 p. (Available from the American Institute of Physics, 57 E. 55 St., New York 22, N. Y., $1.00).
A sample of Sm_2O_3 was given a long neutron bombardment in the Hanford pile. By mass spectrographic analysis active masses were observed at mass numbers 145, 151, 152, 154, 155, 156, 161, 167, 169 and 176. The interpretation of these active masses is given in a table. Published in the Physical Review, v. 71, p. 643.

PB 88601. INGHRAM, M. G. and others. 55 hour element 61 formed in fission. (Atomic Energy Commission Rept MDDC-779). Jan 1947. 3 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
A chemical separation of element 61 from fission products was made to verify the mass assignment and to study the activity of 49 hour 61^{149}. This activity has been assumed to have a mass of 149 from fission yield data. Published in the Physical Review, v. 71, No. 11, p. 743.

PB 88599. INGHRAM, M. G. and others. The isotopic constitution of lanthanum and cerium. (Atomic Energy Commission Rept MDDC-1084). Apr 1947. 7 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The isotopic abundances of lanthanum and cerium have been determined by means of a mass spectrometer. In addition to the known lanthanum isotope of mass 139, a new isotope of mass 138 and abundance 0.089% has been discovered. Since this isotope is isobaric with two neighboring stable isotopes it should be radioactive. This activity was observed and the half-life found to be approximately 2 x 10^{10} years. Upper limits for the non-existence of other lanthanum isotopes were determined. The abundance of cerium isotopes of masses 136, 138, 140, and 142 were shown to be 0.193%, 0.250%, 88.48%, and 11.07%, respectively. Upper limits for the non-existence of other cerium isotopes were determined. Published in the Physical Review, v. 72, No. 10.

PB 88600. INGHRAM, M. G. and others. Nuclear isomerism in dysprosium 165. (Atomic Energy Commission Rept MDDC-1121). May 1947. 3 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
Dysprosium isotopes were irradiated which had been separated with a Dempster-type mass spectrograph employing a high in-

density thermal ion source. This was done in order to obtain a direct mass assignment of the 1.25 min K-converted gamma dysprosium activity. Results are shown in a curve and on energy level diagram. Published in the Physical Review, v. 72, No. 6, p. 515.

PB L 88603. KETELLE, B. H. and BOYD, G. E. The exchange adsorption of ions from aqueous solutions by organic zeolites - IV. The separation of the yttrium group rare earths. (Atomic Energy Commission Rept MDDC-1164). Nov 1947. 48 p. Price: Microfilm-$2.00 - Photostat-$5.00

In order to study the radioactive properties of the rare earths, materials of high purity are required and rapid separations of adjacent rare earths are desirable. Previously untested predictions of ion-exchange column theory have been investigated in an effort to make a complete and rapid separation of small quantities of rare earths. Preliminary investigations established that at the relatively high flow rates which can be used at elevated temperatures with exchange columns of very fine mesh adsorbent extremely good separation of milligram quantities of the rare earths was obtained. The separation of all the rare earths has been demonstrated on a 97 cm by 0.26 cm^2 column of 270/325 mesh Dowex-50 resin operated at 100° C. The pH of the 4.75% citric acid used was 3.2 for the heavy earths and 3.4 for the light earths. Because its ionic radius is almost the same as that of holmium, yttrium is desorbed between holmium and dysprosium in column separations. As a result the separation of holmium, yttrium and dysprosium is even more difficult to accomplish than is the separation of the heavier rare earths. By the use of the ion-exchange column for quantitative estimation of rare earth impurities, the degree of separation of adjacent heavy rare earths is shown. A sample of erbium which had previously been purified on a column was shown to contain only 10 p.p.m. of thulium. Published in the Journal of the American Chemical Society, v. 69, No. 11, pages 2800-2812.

PB 88604. KROHN, ROBERT. "2" packless through vacuum valve. (Atomic Energy Commission Rept MDDC-974; LADC Rept 104). Sep 1947. 2 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).

A diagram and description are given for a valve designed for use on accelerator tubes where a through type valve is needed to allow a line of sight path for ion beams. Published in the Review of Scientific Instruments, v. 18, No. 9, page 682.

P

PB L 88605. LATIMER, WENDELL M. Tables of free energy functions for elements and compounds in the temperature range 2000°-5000° K. (Atomic Energy Commission Rept MDDC-1162; UC Rept 81). Sep 1947. 14 p. Price: Microfilm-$1.25-Photostat-$2.00

Tables are given summarizing $\frac{\Delta F - \Delta H^\circ}{T}$ values for the elements H, B, C, N, O, F, Na, Mg, Al, Si, Cl, Ca, Ti, Zr and Fe and the compounds H_2, C_2, N_2, O_2, HF, OH, CO, MgH, NO, HCl, CN, Si_2N_2O, Si_2O, TiO, BO, SiF, NaCl, NH, CH, SiH, AlO, BH, AlH, MgO, and FeO, as gases, over the temperature range 2000° to 5000°K. The free energies and equilibrium constants for the dissociation of the compounds are summarized over the same temperature range. The free energy functions and equilibrium constants are also given at 2000° K for the solids MgO, CaO, TiO, and SiO_2 and for CO_2 gas at 2000° and 3000° K. Based on work done by Radiation Laboratory, University of California, Berkeley.

PB 88606. LEVY, P. W. The beta-ray spectrum of C^{14}. (Atomic Energy Commission Rept MDDC-975). Aug 1947. 2 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).

A 180° beta-ray spectrometer of 10 cm. radius, using a Geiger-Mueller Tube as the detecting device, has been used to investigate the continuous beta-ray spectrum of the 4700 year C^{14} activity. Published as a letter to the Editor in Physical Review, v. 72, No. 3, p. 248.

PB L 88607. LORENZ, E. and others. Biological action of gamma and X-rays - I. Exposure of mice to daily doses of gamma radiation at two rates: 5.5 r/hr and 0.11 r/8 hr. (Atomic Energy Commission Rept MDDC-907). 1946. 36 p. Price: Microfilm-$1.75 - Photostat-$4.00

Experimental set-up, results, pathological observations, and breeding experiments are described. Tables, graphs and photographs are included. Published in Cancer Research, v. 6, p. 485, and in Journal of National Cancer Institute, v. 6, pp. 349-353.

PB 88609. MACKLIN, R. L. and KNIGHT, G. B. X-rays associated with U-234. (Atomic Energy Commission Rept MDDC-976). Mar 1947. 6 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).

The observation of L and M X-rays from U_{234} unaccompanied by appreciable K - X radiation is reported. The suggestion is made that these arise from recoil atoms following alpha emission. Published in the Physical Review, v. 72, No. 5, p. 435.

PB 88608. MCMILLAN, E. M. Energy and half life of the Be^{10} radioactivity. (Atomic Energy Commission Rept MDDC-1045). Oct 1947. 8 p. (Available from the American Institute of Physics, 57 E. 55 St., N. Y., 22, N. Y., $1.00).

In this paper is reported some work on a beryllium target that had received a very strong deuteron bombardment in the St. Louis cyclotron (about 200,000 microampere hours of 11 Mev deuterons at 45° incidence). Even though this target was about two years old when received, it still carried a total activity about 50 times as strong as the Be^{10} activity. Results are reported on excitation curve, absorption curve and beta energy, isotopic abundance, specific activity and half-life, and yield. Published in Physical Review, v. 72, No. 7, pp. 591-593.

PB L 89691. MARTIN, G. R. A volumetric method for the determination of thorium. (Canada Natl Res Council Atomic Energy Project Rept 1583; Rept MC 113). Feb 1945. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

A method is described for the volumetric determination of thorium. It utilizes the well-known precipitation of thorium as iodate from 6N nitric acid, followed by the dissolution of the precipitate in hydrochloric acid, with the addition of potassium iodide, and the titration of the liberated iodine.

PB 88610. OVERSTREET, R. and JACOBSON, L. On the existence of a calcium isotope with an 8.5 day period. (Atomic Energy Commission Rept MDDC-938). Nov 1946. 3 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).

An attempt to produce Ca^{41} in the Radiation Laboratory, University of California, Berkeley, is described. Published in the Physical Review, v. 72, No. 4, p. 349.

PB L 89693. PANETH, H. R. Diffusion in a capturing medium of sharply varying geometric cross-section. (Canada Natl Res Council Atomic Energy Project Rept 1585; Rept MP 147). Jun 1945. 25 p. Price: Microfilm-$1.50 - Photostat-$3.00

The stationary density distribution in a scattering and capturing medium of rectangular shape whose width changes sharply at one special plane is investigated on the basis of diffusion theory. The exact equation for the amplitudes of harmonics in this plane (and hence the density distribution throughout the medium), for any given distribution in a parallel plane below it, is derived. This exact equation does not give the amplitudes in a closed form except in two limiting cases. A closed approximate expression is also derived giving

the amplitudes of harmonics in the special plane for any ratio of the width above and below that plane, and for any density distribution imposed at a lower plane. These relations are listed. An application of the theory to calculating the neutron density in a thermal column is given in the appendix.

PB 88611. PARMLEY, T. J. and MOYER, B. J. Cobalt 61 radioactivity. (Atomic Energy Commission Rept MDDC-859; BP Rept 86). Mar 1947. 1 p. (Available from the American Institute of Physics, 57 East 55 St., New York, N. Y., $1.00).
Two samples of nickel enriched respectively in isotopes 61 and 62 by the electromagnetic process were subjected to fast neutron bombardment near the target of the Crocker Laboratory cyclotron. Among the activities produced was a prominent one appearing to belong to Co^{61}. In order to establish the mass assignment three experiments were performed. Published in the Physical Review, v. 72, p. 82.

PB L 88612. PATT, H. M. and others. Adrenal response to total body X-radiation. (Atomic Energy Commission Rept MDDC-979). Mar 1947. 19 p. Price: Microfilm-$1.25 - Photostat-$2.00
Adrenal, spleen and kidney weights and adrenal cholesterol content were determined in a timed sacrifice series following total body X-radiation of rats at 200 r, 650 r and 900 r. A significant reduction in adrenal cholesterol is obtained at 3 to 6 hours after exposure to either 650 r or 900 r whereas only a slight decrease is noted at 200 r. After the initial decrease with the mid-lethal dose (650 r), adrenal cholesterol rises markedly reaching a level some 100 percent above the normal one week following irradiation. Animals dying after 650 r show a greatly decreased adrenal cholesterol. With 900 r cholesterol falls more or less progressively until death when an 80 percent reduction is observed. Adrenal weight is elevated significantly 2 days after X-radiation with either 650 r or 900 r. The adrenals continue to show a rather progressive increase in weight at subsequent sacrifice periods. A considerable increase in weight (100-130 percent) is seen at death. The increased adrenal size is not a result of an increase in water content. After 200 r, there is little change in adrenal weight. A decrease in weight of the spleen is seen at all dose levels. Spleen continues to decrease in size until death when it is roughly one-fourth of the control weight. Kidney weights which were included as controls do not change significantly following irradiation. Evidence is cited which suggests that the described changes in adrenal cholesterol and adrenal weight reflect an altered adrenal cortical activity. The latter may, therefore, provide a physiological mechanism for some of the changes observed after X-radiation. Published in the American Journal of Physiology, v. 150, No. 3, pp. 480-487.

PB 88613. PEACOCK, W. C. Decay scheme of $_{45}Rh^{106}$. (Atomic Energy Commission Rept MDDC-1169). Dec 1947. 18 p. (Available from the American Institute of Physics, 57 East 55 St., New York, N. Y., $1.00).
The decay scheme of $_{45}Rh^{106}$ (30 s) is proposed as a complex beta spectra with endpoints at 3.55 ± 0.10 and 2.30 ± 0.10 Mev. The latter is $18 \pm 2\%$ abundant and followed by two gamma rays 0.51 ± 0.02 and 0.73 ± 0.02 Mev in cascade, or a single 1.25 ± 0.05 Mev gamma. The 1.25 Mev gamma is present in 1-2% of the disintegrations. Evidence to support Gamow-Teller selection rules for beta decay is given. Published in the Physical Review, v. 72, No. 11, pp. 1049-1053.

PB 88614. PERLMAN, I. and others. Fission of bismuth, lead, thallium, platinum and tantalum with high energy particles. (Atomic Energy Commission Rept MDDC-1048; BC Rept 58). May 1947. 4 p. (Available from the American Institute of Physics, 57 East 55 St., N. Y., 22, N. Y., $1.00).
The 184-inch Berkeley frequency-modulated cyclotron produces deuterons, helium ions and neutrons of energies up to 200, 400, and 100 mev respectively. Nuclear fission in elements covering the range of atomic numbers 83 (bismuth) to 73 (tantalum) has been observed with one or more of the above projectiles. Fission reaction on these light elements with high energy particles is noted in tabular form. Published in the Physical Review, v. 72, No. 4, p. 352.

PB L 89684. PLACZEK, G. The angular distribution of neutrons emerging from a plane surface. (Canada Natl Res Council Div of Atomic Energy Rept 1604). May 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The Wiener-Hopf expression for the angular distribution in Milne's standard case is transformed into a form suitable for numerical evaluation. The results of the evaluation carried out by the Mathematical Tables Project are given.

PB L 89685. PLACZEK, G. and SEIDEL, W. Milne's problem in transport theory. (Canada Natl Res Council Div of Atomic Energy Rept 1605). May 1947. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
A modified derivation of the Wiener-Hopf solution of Milne's problem is given in a form suitable for application to problems in the theory of neutron diffusion.

PB L 88615. PROSSER, C. L. and others. The clinical sequence of physiological effects of ionizing radiation in animals. (Atomic Energy Commission Rept MDDC-611). Sep 1947. 31 p. Price: Microfilm-$1.75 - Photostat-$4.00
Researches in clinical physiology and biochemistry at the Metallurgical Laboratory have been concerned with (1) ascertaining whether different kinds of ionizing radiation have similar effects upon the mammalian body, (2) measuring sensitive reactions as a function of dose in the hope of setting permissible exposure limits, (3) searching for sensitive biological indicators of exposure, and (4) describing the course of radiation damage sufficiently to suggest profitable directions for research into mechanisms of radiation damage that might eventually lead to effective therapy. None of these objectives have been attained in a final form, but sufficient data are available to justify a summary at this time. Four generalizations are given. A general abridgement of this paper may be found in Radiology, v. 49, p. 299-313. PB L 88616 supplements this report.

PB L 88616. PROSSER, C. L. and others. The clinical sequence of physiological effects of ionizing radiation in animals. Supplement. (Atomic Energy Commission Rept MDDC-1066). Sep 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
New material to be added to the report CH 3752 (PB L 88615) with the above title. Published in Radiology, v. 49, pp. 299-313.

PB 88623. SERBER, R. Nuclear reactions at high energies. (Atomic Energy Commission Rept MDDC-1357). Sep 1947. 5 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00).
The general features of the high energy nuclear reactions which have been observed at the Radiation Laboratory, University of California, are described. Published in the Physical Review, v. 72, No. 11, pp. 1114-1115.

PB 88628. TITTERTON, E. W. A portable pulse generator. (Atomic Energy Commission Rept MDDC-791; LADC Rept

Physics. Nuclear (contd)

948) Jan 1947. 14 p. (Available from the American Institute of Physics, 57 East 55 St., New York 22, N. Y., $1.00)

In the routine testing of electronic equipment, particularly in a nuclear laboratory, there is frequently a requirement for a simple, lightweight pulse generator. The instrument described is built to fill such a role. It provides rectangular pulses of duration 1, 10 and 100 μ secs (or other chosen values) of amplitude smoothly variable from 0 to 75 v. Either positive or negative pulses are available from low-impedance sources, and an internal repetition rate, covering the range 1 to 10,000 cycles per sec, is included. In addition, the circuit may be driven from an external signal generator, or a source of random pulses, where this is desired. The instrument has proved of utility in circuit research when used as a source of pulses in conjunction with a synchroscope. Published in the Review of Scientific Instruments, v. 18, No. 9.

PB L 88135. U. S. ATOMIC ENERGY COMMISSION. List of declassified documents. (Cumulation of releases 1-7). Oct 1947. 33 p. Price: Microfilm-$1.75 - Photostat-$4.00

This list includes all documents on nuclear physics which have been declassified by the Commission up to October 1, 1947 and which have been released either through the Office of Technical Services or by publication in a journal. It does not include documents withheld from public listing in the absence of notice from the authors that such listing is agreeable to them or withheld because of publication commitments. See also PB L 88136-PB L 88138.

PB L 88136. U. S. ATOMIC ENERGY COMMISSION. List of declassified documents. (Declassified Documents Release 8). Oct 1947. 11 p. Price: Microfilm-$1.25 - Photostat-$2.00

Documents released in the period October 2, to Oct 20, 1947 are listed. A supplement to PB L 88135.

PB L 88137. U. S. ATOMIC ENERGY COMMISSION. List of declassified documents. (Declassified Documents Release 9). Dec 1947. 10 p. Price: Microfilm-$1.25 - Photostat-$2.00

Further documents are listed in this supplement to PB L 88135 and PB L 88136.

PB L 88138. U. S. ATOMIC ENERGY COMMISSION. List of declassified documents. (Declassified Documents Release 10). Jan 1948. 12 p. Price: Microfilm-$1.25 - Photostat-$2.00

This is the last issue of Declassified documents release list. Henceforth the information contained in this list will be included in the semi-monthly Abstracts of declassified documents. For release lists 1-9, see PB L 88135-PB L 88137.

PB 88630. WATSON, W. W. and others. Thermal diffusion with boron trifluoride. (Atomic Energy Commission Rept MDDC-738) Jun 1947. 8 p. (Available from the American Institute of Physics, 57 E. 55 St., New York 22, N. Y., $1.00)

Boron of mass 10 is of considerable interest in nuclear research because of its large cross-section for the $B^{10}(n, \alpha)Li^7$ reaction. To increase the concentration of this isotope in some boron compound, it seemed possible that the thermal diffusion method, which has been so successful in numerous isotope separation experiments, would serve. The only available gaseous compound stable over a sufficiently large temperature range is boron trifluoride. With BF_3 gas at atmospheric pressure in 7 meters of hot-wire Clusius and Dickel columns with $\Delta T = 400°$ C the equilibrium separation factor for $B^{10}F_3/B^{11}F_3$ was 1.32 ± 0.12, reached in slightly over three days. The best separation factor per meter of column indicates a thermal diffusion constant $\alpha \cong 5.0 \times 10^{-4}$ and $R_T \cong 0.06$. Experience in purifying commercial BF_3 gas and with mass spectrometer analyses is discussed. Concentrated B^{10} material can be obtained by the thermal diffusion method, but with an over-all efficiency of the plant much too low to make it attractive. Published in the Physical Review, v. 71, pp. 887-890.

MISCELLANEOUS

PB L 70475, PB L 73747 - PB L 73749, PB L 84348, PB L 84352, PB L 84378, PB L 84382, PB L 84384, PB L 84389, PB L 84397, PB L 84399 - PB L 84400, PB L 84404, PB L 84493, PB L 84528, PB L 84543, PB L 84553. DEUTSCHES MUSEUM, MUNICH, GERMANY. Handbuch der Deutschen Aktiengesellschaften (Directory of German corporations).

The following series of microfilms were prepared by FIAT investigators at the Deutsches Museum in Munich. These volumes were published six times annually by Hoppenstedt & Co., Berlin. An alphabetical index by firm names and an index by locations is included in each volume. (The later issues of this directory were put under a secret classification.) For convenience, the films are listed here by FIAT reel numbers and frame numbers, which arrangement follows a recognizable sequence. Apparent discrepancies in page numbers of volumes derive from the fact that advertising material occupies those pages and although not numbered are thus accounted for. PB's 70474 and 84429, listed below, contain periodicals in addition to the indicated portions of the directories and their full contents will be listed at a later date. The prices quoted are for the complete reels. In German.

PB No.	Reel No.	Frames	Year	Vol.	Pages in Volume	Prices: Micro.	Prices: Rel.
L 70474 (Periodical reel)	G 246	1335-1759A	1939	1	1-844	$6.00	$75.50
L 70475	G 247	1760-1969	1939	1	845-1255	6.00	81.00
L 70475	G 247	1970-2569	1939	2	1257-2455		
L 73747	G 248	2570-3260	1939	3	2457-3831	6.00	83.00
L 73747	G 248	3261-3390	1939	4	3833-4085		
L 73748	G 249	3391-4016	1939	4	4086-5335	6.00	82.50
L 73748	G 249	4017-4213	1939	5	5337-5723		
L 73749	G 250	4214-4811	1939	5	5724-6918	6.00	82.50
L 73749	G 250	4812-5035	1939	6	6921-7361		
L 84378	G 251	5036-5653	1939	6	7362-8595	7.00	83.00
L 84378	G 251	5654-5855	1941	1	1-389		
L 84404	G 252	5856-6179	1941	1	390-1034	7.00	87.00
L 84404	G 252	6180-6713	1941	2	1041-2090		
L 84397	G 253	6714-7364	1941	3	2097-3386	7.00	67.00
L 84384	G 254	7365-8041	1941	4	3393-4730	7.00	83.00
L 84384	G 254	8042-8180	1941	5	4737-5001		
L 84352	G 255	8181-8743	1941	5	5003-6122	7.00	75.00
L 84352	G 255	8744-8917	1941	6	6129-6461		
L 84348	G 256	8918-9644	1941	6	6462-7912	7.00	82.00
L 84348	G 256	9645-9727	1943	1	1-153		
L 84400	G 257	9728-9999, 1-172	1943	1	155-1035	7.00	81.00
L 84400	G 257	173-524	1943	2	1041-1725		
L 84399	G 259	525-705	1943	2	1726-2075	7.00	78.00
L 84399	G 259	706-1287	1943	3	2081-3211		
L 84389	G 260	1288-1885	1943	4	3217-4379	7.00	81.00
L 84389	G 260	1886-2085	1943	6	5521-5904		
L 84382	G 261	2086-2386	1943	6	5905-6495	7.00	89.00
L 84382	G 261	2387-2965	1943	5	4385-5515		
L 84429 (Periodical reel)	K 204	2109-2564A	1940	1	1-897	7.00	65.00
L 84543	K 205	2565-2618	1940	1	898-1003	7.00	93.00
L 84543	K 205	2619-3166	1940	2	1009-2091		
L 84543	K 205	3167-3475A	1940	2	2097-2700		
L 84553	K 206	3476-3855	1940	3	2701-3451	7.00	79.00
L 84553	K 206	3856-4248	1940	4	3457-4235		
L 84493	K 207	4249-4617	1940	4	4237-4971	7.00	93.00
L 84493	K 207	4618-5159A	1940	5	4977-6058		
L 84528	K 208	5160-5366	1940	5	6059-6459	7.00	100.00
L 84528	K 208	5367-6143	1940	6	6465-8011		

Miscellaneous (contd)

PB L 73682. DEUTSCHES MUSEUM, MUNICH, GERMANY. Publications. (FIAT Microfilm Reel O 192, Frames 5373-6193) 1939-1944. 821 f. Price: Microfilm-$6.00 - Enlargement print-$82.50

This FIAT microfilm reel, prepared by FIAT personnel in Germany, contains the 1939, 1940 and 1944 editions of the "Veredlerjahrbuch Deutscher Färber-Kalender," which is a yearbook of the processing and dyeing industry. Also on the reel is Volume 10, Edition A, Numbers 1-6, covering the year 1939 of "Forschung auf dem Gebiete des Ingenieurwesens," a bimonthly publication of the Verein Deutscher Ingenieure and its scientific council. These publications as listed below are available individually as enlargement prints; the entire reel may be obtained as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
5373-5603 PB L 73682	"Veredlerjahrbuch Deutscher Färberkalender" (Processing Yearbook of German Dyer Calendar). Editor: W. Zaenker. 1939. In German. Publisher: Publishing Agency for the German Dyer Calendar, Franz Eder, Munich.	$23.50
5604-5795 PB L 73682	"Veredlerjahrbuch Deutscher Färberkalender" (Processing Yearbook of German Dyer Calendar). Editor: W. Zaenker. 1940. In German. Publisher: Publishing Agency for the German Dyer Calendar, Franz Eder, Munich.	19.50
5796-6037 PB L 73682	"Veredlerjahrbuch Deutscher Färberkalender" (Processing Yearbook of German Dyer Calendar). Editor: W. Zaenker. 1944. In German. Publisher: Publishing Agency for the German Dyer Calendar, Franz Eder, Munich.	24.50
6038-6193 PB L 73682	"Forschung auf dem Gebiete des Ingenieurwesens" (Research in the field of engineering). Editor: Association of German Engineers and its scientific council directed by Ernst Schmidt. 1939. Vol. 10 (Edition A). In German. Publisher: VDI-Verlag, G.m.b.H., Berlin.	16.00

PB L 86196. FINDLAY, GORDON R. Drawing of parts for extinguishing apparatus. (Science Translation Service Rept 47). Oct 1947. 17 p. Price: Microfilm-$1.25 - Photostat-$2.00

Drawings and lists of parts for compressed air foam apparatus for S-boats.

PB L 73727. SINDIC and DINGER (publishers). Industrial yearbooks. (FIAT Microfilm Reel O 266, Frames 6130-6950) 1938-1941. 821 f. Price: Microfilm-$6.00 - Enlargement print-$82.50

This FIAT microfilm reel consists of yearbooks issued by various German industries as listed below. Each yearbook contains statistical reports, articles of general interest for the industry, sometimes new laws and regulations, and numerous advertisements. Individual volumes may be obtained as enlargement prints; please give PB and frame numbers when ordering. In German.

Frames	Title	Price
6130-6244 PB L 73727	Yearbook of the tanning and leather industries. 1940. In German.	$11.50
6245-6480 PB L 73727	Same title as above. 1941. In German.	24.00
6481-6788 PB L 73727	Yearbook of the German sugar production. 1938/1939. In German.	31.00
6789-6950 PB L 73727	Same title as above. 1940. In German. Incomplete.	17.50

PB L 86309. U. S. OFFICE OF TECHNICAL SERVICES. TECHNICAL INDUSTRIAL INTELLIGENCE DIVISION. Inquiries for technical information. (Received Jan. 22, 1947 to Feb. 21, 1947). n. d. 21 p. Price: Microfilm-$1.50 - Photostat-$3.00

During this period 262 inquiries for information on German technology were received from industrial concerns, trade organizations, research laboratories, professional societies, educational institutions, and private individuals. An attached list gives names of inquirers, nature of inquiries, and actions taken.

PB L 86301. U. S. OFFICE OF TECHNICAL SERVICES. TECHNICAL INDUSTRIAL INTELLIGENCE DIVISION. Reports by units. (Progress Rept 14). Feb 1947. 14 p. Price: Microfilm-$1.25 - Photostat-$2.00

A summary of the work accomplished by the various units for the month of February 1947.

PB L 88883. VASHAKIDZE, D. R. The numerical solution of the biharmonic equation. (CONLAN 101). 1941. 21 p. Price: Microfilm-$1.50 - Photostat-$3.00

A new method is given for the numerical integration of the differential equation as soon as the first derivative of the desired functions on the boundary are specified. This problem is solved by means of a network. Two kinds of solution are used. The results obtained can be utilized for the numerical solution of the first limiting value in two-dimentional problems in the theory of elasticity. Publications of the Mathematical Institute of Teflis, IX, 1941 (Russian).

PB L 88082. YASUMATSU, KEIZO. Apoidea of Micronesia. III. Records of the genera Megachile, Meriades, Ceratina and Prosopis. Mar 1942. 15 p. Price: Microfilm-$1.25 - Photostat-$2.00

The bees treated in this report were collected by Prof. Esaki and his co-workers from Micronesia since the year 1939 and preserved in the collection of the Entomological Laboratory, Kyūsyū Imperial University, Hukuoka. Reprinted from Tenthredo/Acta Entomologica, v. 3, No. 4. In English.

PB L 88080. YASUMATSU, KEIZO. Sphecoidea of Micronesia. III. Family Larridae. Oct 1941. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

This paper deals with the Larridae collected by Prof. Teiso Esaki and his co-workers during their sojourns (1938-1940) in Micronesia. The material is preserved in the collection of the Entomological Laboratory, Kyūsyū Imperial University, Hukuoka. In English. Reprinted from Mushi, v. 14, No. 1.

PB L 88081. YASUMATSU, KEIZO. Vespoidea of Micronesia. II. Hymenoptera. 1945. 11 p. Price: Microfilm-$1.25 - Photostat-$2.00

Results of Prof. Teiso Esaki's Micronesia expeditions 1936-1940. Entomological Laboratory, Kyūsyū Imperial University. Reprinted from Mushi, v. 16. In English.

LEATHER AND LEATHER PRODUCTS

PB L 84459. REICHSPATENTAMT, BERLIN. German patent applications in tanning, hide treatment, and leather processing. (FIAT Microfilm Reel B 81, Frames 8248-9193) 1935-1944. 946 f. Price: Microfilm-$7.00 - Enlargement Print-$96.00
This reel, prepared by FIAT investigators in Germany, contains 211 applications of class 28. Individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
8248-8253 PB L 84459	CHEMISCHE FABRIK A. TH. BOEHME, DRESDEN. Process for fulling dry mineral-tanned leather and for soaking raw hides. Ger. patent application B 199591 IVa/28a, dated Sep 14, 1942. In German.	$2.00
8254-8256 PB L 84459	A. TH. BOEHME, CHEM. FABRIK, DRESDEN. Process for wet degreasing unhaired hides and leather with solvents. Ger. patent application B 199590 IVd/28a, dated Sep 12, 1942. In German.	2.00
8257-8260 PB L 84459	A. TH. BOEHME, CHEM. FABRIK, DRESDEN. Process for tanning with vegetable tanning extracts. Ger. patent application B 200482 IVd/28a, dated Nov 26, 1942. In German.	2.00
8261-8265 PB L 84459	BYK-GUELDNERWERKE CHEMISCHE FABRIK A.G., BERLIN. Soaking agent for leather. Ger. patent application B 197453 IVd/28a, n.d. In German.	2.00
2866-8270 PB L 84459	BYK-GUELDNERWERKE CHEMISCHE FABRIK A.G., BERLIN. Process for the production of tannin from galls. Ger. patent application B 205538, Mar 6, 1944. In German.	2.00
8271-8275 PB L 84459	(A. TH. BOEHME, CHEM. FABRIK DRESDEN?) Process for stuffing leather of any kind. Ger. patent application B 196638 IVd/28a, dated Dec 24, 1941. In German.	2.00
8276-8277 PB L 84459	CHEM. FABRIK J.A. BENCKISER G.M.B.H., LUDWIGSHAFEN. Process for deliming limed hides and skins. Ger. patent application C 56872, dated Nov 6, 1941. In German. Supplement to patent 673163.	2.00
8278-8281 PB L 84459	CHEM. FABRIK J.A. BENCKISER G.M.B.H., LUDWIGSHAFEN. Process for tanning hides and skins. Ger. patent application C 56990, dated Dec 20, 1941. In German. Addition to patent 671712.	2.00
8282-8288 PB L 84459	CHEM. FABRIK GRUENAU, BERLIN-GRUENAU. Process for dressing furs. Ger. patent application C 57008 IVd/28a, dated Dec 24, 1941. In German.	2.00
8289-8291 PB L 84459	CHEM. FABRIK J.A. BENCKISER, LUDWIGSHAFEN. Tanning of hides and skins. Ger. patent application C 57574 IVd/28a, dated Aug 27, 1942. In German. Addition to patent 671712.	2.00
8292-8297 PB L 84459	CHEM. FABRIK I. A. BENCKISER, LUDWIGSHAFEN. Tanning of hides and skins. Ger. patent application C 57012 IVd/28a, dated Dec 29, 1941. In German.	2.00
8298-8301 PB L 84459	BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Preserving of unhaired hides. Ger. patent application B 206766 IVd/28a, dated Jul 22, 1944. In German.	2.00
8302-8305 PB L 84459	CHEM. FABRIK POTT & CO. G.M.B.H., PIRNA-COPITZ. Production of vegetable tanning exacts. Ger. patent application C 59005 IVa/28a, dated May 4, 1944. In German.	2.00
8306-8311 PB L 84459	BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Tanning of unhaired hides with aluminum salts. Ger. patent application B 202704 IVd/28a, dated May 24, 1943. In German.	2.00
8312-8315 PB L 84459	I.G. FARBEN, LEVERKUSEN. Fat-treating of leather. Ger. patent application G 69717 IVd/12o, dated Nov 7, 1942. In German.	2.00
8316-8319 PB L 84459	ILLIG'SCHE PAPIERFABRIK VERTR. GESELLSCHAFT M.B.H., EBERSTADT/DARMSTADT. Treatment of green hides. Ger. patent application J 56895 IVc, dated Jan 16, 1937. In German. Addition to patent application J 50904 IVa/28a.	2.00
8320-8326 PB L 84459	I.G. FARBEN A.G., FRANKFURT AM MAIN. Tanning process. Ger. patent application G 67826 IVd/28a, dated Sep 12, 1940. In German.	2.00
8327-8331 PB L 84459	BOEHME FETTCHEMIE, CHEMNITZ. Pickling of unhaired hides and pelts. Ger. patent application B 200182 IVd/28a, dated Nov 5, 1942. In German.	2.00
8332-8335 PB L 84459	CHEMISCHE WERKE ALBERT WIESBADEN-BIEBRICH. Tanning of animal hides and skins with chrome tanning agents. Ger. patent application C 50169 IVa/28a, dated Sep 9, 1940. In German.	2.00
8336-8339 PB L 84459	BOEHME FETTCHEMIE, CHEMNITZ. Degreasing of hides and skins. Ger. patent application B 196087 IVd/28a, dated Nov 11, 1941. In German. Addition to patent 696735 (B 196086).	2.00
8340-8341 PB L 84459	H.A. BRAUN & CO., BERLIN-TEMPELHOF. Detergents for live or dead skins. Ger. patent application B 206921 IVd/28a, 12, dated Aug 15, 1944. In German.	2.00
8342-8350 PB L 84459	BOEHME FETTCHEMIE, CHEMNITZ. Production of chamois leather. Ger. patent application B 194877 IVd/28a, dated Jul 12, 1941. In German.	2.00
8351-8354 PB L 84459	BOEHME FETTCHEMIE, CHEMNITZ. Tanning of pelts. Ger. patent application B 206672 IVd/28a, dated Jul 12, 1944. In German.	2.00
8355-8356 PB L 84459	CHEM. FABRIK STOCKHAUSEN & CO., KREFELD. Preparation of hides and skins for the tanning process. Ger. patent application C 59162 IVd/28a, dated Jul 29, 1944. In German.	2.00
8357-8358 PB L 84459	CHEMISCHE FABRIK J.A. BENCKISER, LUDWIGSHAFEN. Depilating hides and skins. Ger. patent application C 57804, dated Nov 24, 1942. In German.	2.00
8359-8362 PB L 84459	BOEHME FETTCHEMIE, CHEMNITZ. Preparing of unhaired hides for tanning. Ger. patent application B 189154 IVd/28a, dated Nov 22, 1939. In German. Addition to B 182114 IVd/28a.	2.00

8363-8365 PB L 84459 — CHEM. FABRIK J. A. BENCKISER, LUDWIGSHAFEN. Tanning of hides and skins. Ger. patent application C 55520, dated Dec 1, 1939. In German. 2.00
Addition to patent 671712.

8366-8369 PB L 84459 — ABEL, CARL (Inventor). Production of wash leather, filtering leather, clothing leather, etc. Ger. patent application A 100170 IVd/28a, dated Aug 7, 1944. In German. 2.00

8370-8372 PB L 84459 — KNOELL & CO., BERLIN. Impregnating fur leather (furs) for resistance to liquid fuels. Ger. patent application K 172268 IVd/28a, dated Sep 9, 1944. In German. 2.00

8373-8383 PB L 84459 — BOEHME FETTCHEMIE, CHEMNITZ. Tanning with synthetic tanning agents. Ger. patent application B 202095 IVd/28a, dated Apr 7, 1943. In German. 3.00

8384-8388 PB L 84459 — I.G. FARBEN, FRANKFURT AM MAIN. Fat-liquoring agents for leather. Ger. patent application G 69914, dated Jun 25, 1941. In German. 2.00

8389-8391 PB L 84459 — TROEGER, CARL HERBERT and KAESTNER, JOH GEORG (Inventors). Tanning process. Ger. patent application K 172449 IVd/28a, dated Oct 9, 1944. In German. 2.00

8392-8395 PB L 84459 — Tanning of hides. Ger. patent application. In German. 2.00

8396-8398 PB L 84459 — I. G. FARBEN, LUDWIGSHAFEN. Production of vegeteble tanning agents. Ger. patent application J 76506 /28a, dated Dec 29, 1943. In German. 2.00

8399-8403 PB L 84459 — LUENING, HANS-JOACHIM. Production of flexible leather and elastic arm rings. Ger. patent application L 108118 IVd/28a, dated Jun 8, 1942. In German. 2.00

8404-8410 PB L 84459 — Tanning of animal hides and skins. Ger. patent application K 168990 IVd/28a, (in duplicate), dated Jul 5, 1943. In German. 2.00

8411-8420 PB L 84459 — I. G. FARBEN, LUDWIGSHAFEN. Greasing agent for leather. Ger. patent application J 69941 IVd/28a, dated Jun 30, 1941. In German. 2.00

8421-8423 PB L 84459 — I. G. FARBEN, LUDWIGSHAFEN. Chrome tanning of animal hides and skins. Ger. patent application J 72889 IVd/28a, dated Aug 7, 1942. In German. 2.00

8424-8425 PB L 84459 — I. G. FARBEN, LUDWIGSHAFEN. Deliming of unhaired hides. Ger. patent application J 73279 IVd/28a, dated Oct 2, 1942. In German. 2.00

8426-8427 PB L 84459 — I.G. FARBEN, FRANKFURT AM MAIN. Production or improvement of leather. Ger. patent application J 73289 IVd/28a, dated Oct 7, 1942. In German. 2.00
Addition to patent J 73242 IVd/28a.

8428-8429 PB L 84459 — I.G. FARBEN, LUDWIGSHAFEN. Greasing of leather. Ger. patent application J 67130 IVd/28a, dated Jun 1, 1940. In German. 2.00

8430-8433 PB L 84459 — BOEHME FETTCHEMIE, CHEMNITZ. Production of leather stuffing agents. Ger. patent application B 198664 IVd/28a, dated Jun 22, 1942. In German. 2.00
Addition to application B 197265 IVd/28a.

8434-8437 PB L 84459 — I.G. FARBEN, LUDWIGSHAFEN. Tanning of animal unhaired hides and skins. Ger. patent application J 58012 IVd/28a, dated Mar 30, 1939. In German. 2.00

8438-8441 PB L 84459 — I.G. FARBEN, LUDWIGSHAFEN. Leather stuffing agents. Ger. patent application J 70643 IVd/28a, dated Oct 10, 1941. In German. 2.00

8442-8446 PB L 84459 — BYK-GUELDENWERKE CHEM. FABRIK A.G., BERLIN. Tanning agent. Ger. patent application K 164024 IVd/28a, dated Mar 16, 1942. Inventor: E. Kromm. In German. 2.00

8447-8452 PB L 84459 — I.G. FARBEN, FRANKFURT AM MAIN. Fixing agents for tanning materials. Ger. patent application J 62610 IVd/28a, dated Oct 7, 1938. In German. 2.00

8453-8455 PB L 84459 — I.G. FARBEN, LUDWIGSHAFEN. Degreasing of skins and hides. Ger. patent application J 67639 IVd/28a, dated Aug 13, 1940. In German. 2.00
Addition to patent 767225 IVd/28a.

8456-8458 PB L 84459 — I.G. FARBEN, LUDWIGSHAFEN. Agents for the treatment of hides and leather. Ger. patent application J 74595 IVd/28a, dated Mar 17, 1943. In German. 2.00
Addition to J 68038 IVd/28a
J 73819 IVd/28a.

8459-8460 PB L 84459 — FISCHER, KURT (Inventor). Pickling of fur pelts. Ger. patent application F 92774 IVd/28a, dated Nov 6, 1942. In German. 2.00

8461-8463 PB L 84459 — I.G. FARBEN, LUDWIGSHAFEN. Leather fatting agent. Ger. patent application J 71317 IVd/28a, dated Jan 9, 1942. In German. 2.00

8464-8465 PB L 84459 — HELMCKE, RUDOLF (Inventor). Production of leather, impermeable to moisture. Ger. patent application H 175072 IVd/28a, dated Oct 26, 1944. In German. 2.00

8466-8472 PB L 84459 — ILLIG'SCHE PAPIERFABRIK VERTRIEBSGESELLSCHAFT M.B.H., DARMSTADT/EBERSTADT. Production of a lime cream for liming hides and skins. Ger. patent application J 65438 IVd/28a, dated Aug 12, 1939. In German. 2.00

8473 PB L 84459 — DIETRICH, W. (Inventor). Production and processing of leather. Ger. patent application G 107630 IVd/28a, dated May 25, 1943. In German. 2.00

8474-8475 PB L 84459 — GENNINGER, CARLOS (Inventor). Tanning agent. Ger. patent application G 105103, dated Mar 23, 1942. In German. 2.00
Addition to G 101831 IVc/12o.

8476-8480 PB L 84459 — GERLACH, ADOLF and KAPPERT, HANS (Inventors). Production of leather, especially pigskin. Ger. patent application G 101825 IVd/28a, dated Jun 7, 1940. In German. 2.00

8481-8482 PB L 84459 — Leather impregnating agent. Ger. patent application G 102722 IVd/28a, dated Dec 19, 1940. In German. 2.00

8483-8486 PB L 84459 — GALGALL, OSKAR (Inventor). Complete decomposition of the tanning extracts, carbohydrates, fats, and other

substances contained in acorns, acorn shells, and acorn cups into new materials. Ger. patent application G 99821, dated Mar 28, 1939. In German. 2.00

8487-8488 PB L 84459 GERBEREI, HUGO HESS (Inventor). Preservation of vegetable parts containing tanning substances. Ger. patent application H 174221 IVc/28a, dated May 20, 1944. In German. 2.00

8489-8493 PB L 84459 HERBERTS, K. & CO., WUPPERTAL-BARMEN. Leather oils and leather fats. Ger. patent application H 163468 IVd/28a, dated Oct 17, 1940. In German. 2.00

8494-8498 PB L 84459 ELOED, EGON (Inventor). Stuffing of leather. Ger. patent application E 54436, dated Jan 23, 1941. In German. 2.00

8499-8501 PB L 84459 ENGLISH, FRANK (Inventor). Leather from internal animal organs. Ger. patent application E 57467 IVd/28a, dated Jul 5, 1943. In German. 2.00

8502-8504 PB L 84459 EBERLE, G. & CO., STUTTGART. Deliming of unhaired hides. Ger. patent application E 57896 IVd/28a, dated Dec 4, 1943. In German. 2.00

8505-8506 PB L 84459 I.G. FARBEN, LUDWIGSHAFEN. Dressing of tanned upper leather. Ger. patent application J 75396 IVd/28a, dated Jun 28, 1943. In German. 2.00

8507-8508 PB L 84459 BOEHME FETTCHEMIE, CHEMNITZ. Pickling of unhaired hides and fur pelts. Ger. patent application B 202741 IVd/28a, dated May 25, 1943. In German. 2.00
Addition to application B 200182 IVd/28a.

8509-8510 PB L 84459 CHEM. FABRIK STOCKHAUSEN VELTEN/MARK. Medium for destroying the froth of tanning solutions of any kind. Ger. patent application C 55349, dated Aug 17, 1939. In German. 2.00

8511-8514 PB L 84459 BOEHME FETTCHEMIE, CHEMNITZ. Desacidifying chrome leather. Ger. patent application B 207227 IVd/28a, dated Nov 2, 1944. In German. 2.00

8515-8517 PB L 84459 CHEM. FABRIK JOH. A. BENCKISER, LUDWIGSHAFEN. Preservation of hides and skins. Ger. patent application C 57849 IVd/28a, dated Dec 8, 1942. In German. 2.00

8518-8521 PB L 84459 BOEHME FETTCHEMIE, CHEMNITZ. Tanning of fur pelts by iron compounds. Ger. patent application B 201839 IVd/28a, dated Mar 18, 1943. In German. 2.00

8522-8526 PB L 84459 ROCKEL, HEINRICH (Inventor). Machine for dehairing skins. Ger. patent application R 106855 VIII/28b, dated May 8, 1942. In German. 2.00
Three sketches.

8527-8529 PB L 84459 PREISS, ERICH (Inventor). Buffing tool, especially for leather. Ger. patent application P 85937 VII/28b, dated Apr 5, 1943. In German. 2.00

8530-8535 PB L 84459 MAGALDI, PAOLO (Inventor). Manufacture of belts by complete utilization of the hides. Ger. patent application M 157463, dated Apr 28, 1943. In German. 2.00

8536-8545 PB L 84459 OTTE, ERNST (Inventor). Strengthening of leather parts by means of small leather plates. Ger. patent application O 26144 VII/28b, dated Jul 27, 1943. In German. 2.00
Three drawings.

8546-8551 PB L 84459 OBERGAULINGER, JOH. (Inventor). Tool for tearing out bristles from skins. Ger. patent application O 25960 VII/28b, dated Apr 8, 1943. In German. 2.00

8552-8566 PB L 84459 MASCHINENFABRIK MOENUS A.G., FRANKFURT AM MAIN. Skin shaving machine with rotating band knife and an arrangement of front feeding rollers. Ger. patent application M 152548, dated Nov 28, 1941. In German. 3.00

8567-8569 PB L 84459 MASCHINENFABRIK MOENUS A.G., FRANKFURT AM MAIN. Skin shaving machine. Ger. patent application M 152203, dated Oct 22, 1941. In German. 2.00

8570-8574 PB L 84459 DORNBUSCH & CO., KREFELD. Process and appliance for embossing leather and leather substitutes, etc. by pressing the material against plates. Ger. patent application D 93056 VII/28b, dated Apr 19, 1944. In German. 2.00

8575-8578 PB L 84459 HEIMER, BERNHARD (Inventor). Appliance for removing bristles. Ger. patent application H 170745, dated Feb 1, 1943. In German. 2.00
Drawing with four pictures.

8579-8587 PB L 84459 MASCHINENFABRIK MOENUS A.G., FRANKFURT AM MAIN. Skin shaving machine with band knife. Ger. patent application M 155835 VII/28b, dated Nov 9, 1942. In German. 2.00
Two drawings with nine pictures.

8588-8598 PB L 84459 GRUBER, OTTO & CO., MUENCHEN. Process and appliance for tapering leather or rubber pieces, in particular repair boot liners for automobile tires. Ger. patent application G 105328, dated May 1, 1942. In German. 3.00

8599-8602 PB L 84459 MASCHINENFABRIK MOENUS A.G., FRANKFURT AM MAIN. Skin shaving machine with band knife. Ger. patent application M 155652 VII/28b, dated Oct 23, 1942. In German. 2.00
Addition to patent M 155154 VII/28b.
One picture.

8603-8607 PB L 84459 HOLZMANN, WALTER (Inventor). Process for efficiently utilizing small pieces of leather and leather scraps. Ger. patent application H 171679, dated May 22, 1943. In German. 2.00

8608-8620 PB L 84459 EMMERICH, LUDWIG (Inventor). Machine for processing leather by means of a pressure roller. Ger. patent application E 54727, dated Apr 7, 1941. In German. 3.00

8621-8625 PB L 84459 DUERKOPFWERKE A. G., BIELEFELD. Perforating punch for textiles and leather. Ger. patent application D 89214, dated Nov 11, 1942. In German. 2.00

8626-8636 PB L 84459 UNITED SHOE MACHINERY CORPORATION, FLEMINGTON, N. J. Fool-proof leather punch. Ger. patent application U 15 247, dated Dec 7, 1940. In German. 3.00

8637-8640 PB L 84459 DORNBUSCH & CO., KREFELD. Appliance for the smooth insertion of tanned animal hides into embossing calenders. Ger. patent application D 91833, dated Oct 18, 1943. In German. 2.00

8641-8646
PB L 84459
SCHUHFABRIK "JUWEL" SCHOENFELDER & CO., KOM. GES., BERLIN. Leather plate from scrap leather and manufacturing process therefor. Ger. patent application Sch 122671, dated Jun 4, 1941. In German. 2.00

8647-8651
PB L 84459
MASCHINENFABRIK MOENUS A.G., FRANKFURT AM MAIN. Band knife splitting machine fitted with subdivided conveyor belt. Ger. patent application M 155243, dated Sep 8, 1942. In German. 2.00

8652-8664
PB L 84459
LONZONA A.G. FUER AZETATSEIDE, SAECKINGEN/BADEN. Manufacture of a rayon staple fiber fleece from a continuous band of parallel threads. Ger. patent application Z 106658, dated Jan 28, 1942. In German. 3.00
Three pictures with twelve sketches.

8665-8672
PB L 84459
BOEHME, A. TH. (Inventor). Manufacture of chamois type leather. Ger. patent application B 202 375 IVd/28a, dated Mar 1, 1943. In German. 2.00

8673-8688
PB L 84459
BOEHME FETTCHEMIE, CHEMNITZ. Tanning of skins and hides by iron compounds. Ger. patent application B 201670 IVd/28a, dated Mar 5, 1943. In German. 3.00

8689-8695
PB L 84459
BECHTOLD, ARTHUR (Inventor). Fat liquor and leather preservation. Ger. patent application B 191677 IVd/28a, dated Sep 3, 1940. In German. 2.00

8696-8704
PB L 84459
RUFFLENHEUL, GUSTAV (Inventor). Leather cutting machine. Ger. patent application R 108194, dated Aug 23, 1940. In German. 2.00
Two pictures with four sketches.

8705-8714
PB L 84459
ROCKEL, HEINRICH (Inventor). Skin dehairing machine. Ger. patent application R 110888, dated Aug 27, 1941. In German. 2.00
One picture.

8715-8716
PB L 84459
HEYL'SCHE LEDERWERKE LIEBENAU VORM. CORNELIUS HEYL WERK LIEBENAU G.m.b.H., WORMS/RH. Scaling and removing flesh from fish skins and waste parts of fish skins. Ger. patent application H 174745 IVd/28b, dated Aug 2, 1944. In German. 2.00
Supplement to DRPat. C 91579.

8717-8719
PB L 84459
LUCAS, OTTO (Inventor). Tanning agent. Ger. patent application L 113952, dated Mar 6, 1944. In German. 2.00

8720-8723
PB L 84459
HUTFABRIK, MAYER'S, ULM/DONAU. Dehairing of soaked skins. Ger. patent application M 139715 IVd/28a, dated Jun 30, 1939. In German. 2.00

8724
PB L 84459
MASCHINENFABRIK MOENUS A.G., FRANKFURT AM MAIN. Skin shearing machine with band knife. Ger. patent application M 157078 VII/28b, dated Mar 18, 1943. In German. 2.00
Addition to patent M 155835 VII/28b.

8725
PB L 84459
MASCHINENFABRIK MOENUS A.G., FRANKFURT AM MAIN. Skin shearing machine with band knife. Ger. patent application M 157077 VII/28b, dated Mar 18, 1943. In German. 2.00
Addition to patent M 155154 VII/28b.

8726-8731
PB L 84459
ZIEGENBALG, E. KURT (Inventor). Appliance for winding up or warping of threads on the warp roller or warp winder. Ger. patent application Z 26935 VII/86a, dated Mar 6, 1942. In German. 2.00
One drawing.

8732-8735
PB L 84459
EWERTZ, FR. (Inventor). Manufacture of leatherette. Ger. patent application E 52685 /28b, dated Oct 9, 1941. In German. 2.00
Published: Jul 30, 1942

8736-8743
PB L 84459
Production of dehaired skins by using fungus tryptases. Ger. patent application R 95449 IVd/28a, dated Feb 7, 1936. In German. 2.00

8744-8748
PB L 84459
NEUNER, HANS (Inventor). Toggle-level stretching frame for hides and skins. Ger. patent application N 46858, dated Jun 24, 1943. In German. 2.00
One drawing with three sketches.

8749-8752
PB L 84459
ROHRBACHER LEDERFABRIK JOS. POESCHL'S SOEHNE, ROHRBACH. Appliance for reducing fibrous material, in particular leather, to small pieces. Ger. patent application R 115168 VII/26b, dated Dec 28, 1942. In German. 2.00

8753-8757
PB L 84459
ROCKEL, HEINRICH (Inventor). Shearing knife roller for skin dehairing machines. Ger. patent application R 112015, dated Jan 23, 1942. In German. 2.00
One picture with four sketches.

8758-8763
PB L 84459
SCHLIEDER, ERNST (Inventor). Machine for removing dead hair from skins. Ger. patent application Sch 125534, dated Aug 21, 1942. In German. 2.00
One scheme with two pictures.

8764-8769
PB L 84459
STIEL, JOH. and DOHMEIER, HERMANN (Inventors). Device for tapering the edges of leather, particularly for book covers. (Skiving machine). Ger. patent application St 62423, dated Oct 28, 1942. In German. 2.00
Seven claims.

8770-8774
PB L 84459
CHEM. FABRIK A.G., ORANIENBURG. Improving of tanning agents and tanning aids. Ger. patent application B 1F1935 IVd/28a, dated Feb 15, 1938. In German. 2.00

8775-8778
PB L 84459
GUENTHER, SPENGLER and KIESEL, BERT (Inventors). Leather sheets from waste leather. Ger. patent application S 156932 VII/28b, dated Aug 5, 1943. In German. 2.00

8779-8794
PB L 84459
HOPF, GEORG (Inventor). Punching machine for leather and similar materials. Ger. patent application H 168984, dated Jul 21, 1942. In German. 3.00
Four drawings with six diagrams.

8795-8798
PB L 84459
LEDERWERKE FRIEDRICHSDORF G.M.b.H., FRIEDRICHSDORF/TAUNUS. Scaling of fish skins. Ger. patent application L 109427, dated Oct 31, 1942. In German. 2.00
One drawing with two pictures.

8799-8803
PB L 84459
LUECKHAUS, WERNER and HOMEYER, HEINZ (Inventors). Process and equipment for rapid tanning of hides. Ger. patent application L 86654 VII/28b, n.d. In German. 2.00

One drawing with three sketches. The application has been cancelled; see Patent application 664495/34.

8804-8808 PB L 84459 — BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Degreasing of hides and skins. Ger. patent application B 199084 IVd/2/28a, dated Aug 1, 1942. In German. 2.00

8809-8817 PB L 84459 — Fixing of natural or synthetic tanning agents with acid groups on or in fibrous materials. Ger. patent application R 113056 IVd/28a, dated May 22, 1942. In German. 2.00
Addition to patent R 105072 IVd/28a.

8818-8820 PB L 84459 — RICHERT, C.A. (Inventor). Deliming of limed and dehaired hides. Ger. patent application R 99323 IVd/28a, dated Oct 4, 1938. In German. 2.00
Addition to patent R 97479 IVd/28a.

8821-8828 PB L 84459 — Production of dehaired hides. Ger. patent application R 98200 IVd/28a, dated Dec 29, 1936. In German. 2.00

8829-8833 PB L 84459 — ROSER, C.F. G.M.B.H., STUTTGART-FEUERBACH. Preserving and improving tanning agent extracts containing sugar. Ger. patent application R 110807 IVd/28a, dated Oct 27, 1942. In German. 2.00

8834-8842 PB L 84459 — Production of stuffed mineral tanned leather. Ger. patent application R 112291 IVd/28a,(in duplicate), dated Oct 16, 1941. In German. 2.00

8843-8845 PB L 84459 — ROSCHIG, F., CHEM. FABRIK, LUDWIGSHAFEN/RH. Production of stuffed leather. Ger. patent application R 111426 IVd/28a, dated Nov 3, 1941. In German. 2.00

8846-8850 PB L 84459 — Bating of dehaired hides and skins by means of proteolytic enzymes. Ger. patent application R 117095 IVd/28a, dated Sep 13, 1943. In German. 2.00
Addition to R 112427 IVd/28a.

8851-8855 PB L 84459 — Production of dehaired hides by means of fungus tryptases. Ger. patent application R 94938, dated Dec 7, 1935. In German. 2.00

8856-8860 PB L 84459 — RICHERT, C.A., BERLIN-FRIEDENAU. Deliming of limed hides and skins. Ger. patent application R 97479 IVa/28a, dated Mar 17, 1938. In German. 2.00
Laid open for inspection: Nov 10, 1938.

8861-8867 PB L 84459 — Production of dehaired hides by means of fungus tryptases. Ger. patent application R 97257 IVd/28a, dated Sep 4, 1936. In German. 2.00

8868-8870 PB L 84459 — METALLGESELLSCHAFT A.G., FRANKFURT AM MAIN. Stuffing and oiling of leather. Ger. patent application M 155803 IVd/28a, dated Nov 2, 1942. In German. 2.00

8871-8874 PB L 84459 — OEHRING, WALTER and OEHRING, LUCIE (Inventors). Softening and cleansing agent for leather. Ger. patent application O 25934 IVd/28a, dated Mar 22, 1943. In German. 2.00

8875-8877 PB L 84459 — LUCAS, OTTO (Inventor). Production of leather from animal hides by vegetable tanning. Ger. patent application L 114318 IVd/28a, dated Apr 8, 1944. In German. 2.00

8878 PB L 84459 — LUCAS, OTTO (Inventor). Tanning agent. Ger. patent application L 114136 IVd/28a, dated Mar 25, 1944. In German. 2.00
Addition to L 113952 IVd/28a.

8879-8882 PB L 84459 — MAYSER'S HUTFABRIK, ULM/DONAU. Dehairing of skins by a liming process. Ger. patent application M 146463, dated Nov 13, 1939. In German. 2.00

8883-8885 PB L 84459 — SCHWAEBISCHE ZELLSTOFF A.G., EBINGEN (DONAU). Improvement of tanning of animal hides by an additional treatment with nitrous acid or nitrites. Ger. patent application, dated Feb 17, 1943. In German. 2.00

8886-8889 PB L 84459 — SEIDEL, J. KD. GES. GROTTAU. Production of vegetable tanning extracts. Ger. patent application S 160591 IVd/28a, dated Aug 9, 1944. In German. 2.00

8890-8894 PB L 84459 — ROSER, C.F. (Inventor). Improvement of tanning extracts from fruits. Ger. patent application R 111963 IVd/28a, dated Jan 15, 1942. In German. 2.00

8895-8900 PB L 84459 — Chrome tanning process. Ger. patent application R 118060, dated Jan 7, 1944. In German. 2.00

8901-8907 PB L 84459 — ZELLSTOFFABRIK WALDHOF, MANNHEIM-WALDHOF. Refining sulfite waste liquor for tanning. Ger. patent application Z 26538 IVd/28a, dated Jul 25, 1941. In German. 2.00

8908-8914 PB L 84459 — BARTH, KARL (Inventor). Elastic rubber discs utilizing an adhesive effect for dehairing skins. Ger. patent application B 201848, dated Mar 22, 1943. In German. 2.00

8915-8924 PB L 84459 — BARTH, CARL (Inventor). Machine for dehairing and scudding of skins, hides, etc. Ger. patent application B 189776, dated Feb 8, 1940. In German. 2.00

8925-8934 PB L 84459 — ANHALT, MAX (Inventor). Process for improving fur pelts. Ger. patent application A 93569 VII/28b, dated Dec 18, 1941. In German. 2.00
Two illustrations, nine diagrams.

8935-8944 PB L 84459 — ULRICH, LUDWIG and EBERHARDT, EWALD Process and appliance for the production of hair. Ger. patent application U 14403 IVd/28a, dated Jun 30, 1938. In German. 2.00

8945-8950 PB L 84459 — ROHRBACHER LEDERFABRIK JOS. FOESCHL'S SOEHNE, ROHRBACH. Appliance for dehydrating wet, particularly coarse-grained material, e.g. lixivated tan bark. Ger. patent application R 117457 /28a, dated Nov 5, 1943. In German. 2.00

8951-8956 PB L 84459 — Chrome tanning process. Ger. patent application R 115506 IVd/28a, dated Feb 25, 1943. In German. 2.00

8957-8960 PB L 84459 — WEBER, KURT (Inventor). Impregnation of leather with bitumen. Ger. patent application W 115718 IVd/28a, dated Apr 17, 1945. In German. 2.00

8961-8964 PB L 84459 — BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Tanning of fur pelts. Ger. patent application B 202703 IVd/28a, dated May 24, 1943. In German. 2.00

8965-8969 PB L 84459 — BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Manufacture of chamois leather. Ger. patent application B 199838 IVd/28a, dated Oct 3, 1942. In German. 2.00

8970-8973 PB L 84459 — A. TH. BOEHME, CHEM. FABRIK, DRESDEN. Bating of hides and skins with enzymes. Ger. patent application B 195743 IVd/28a, dated Oct 6, 1941. In German. 2.00

8974-8975 PB L 84459 — BYK-GULDENWERKE, CHEM. FABRIK A.G., CRANIENBURG/BERLIN. Tanning of fur pelts. Ger. patent application B 190478 IVd/28a, dated Apr 18, 1940. In German. 2.00

8976-8979 PB L 84459 — BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Tanning with chrome tanning agents. Ger. patent application B 205443, dated Feb 28, 1944. In German. 2.00
Supplement to patent B 200284 IVd/28a.

8980-8983 PB L 84459 — BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Tanning with vegetable and synthetic tanning agents. Ger. patent application B 205441 IVd/28a, dated Feb 28, 1944. In German. 2.00
Addition to Ger. patent application B 200482 IVd/28a.

8984-8985 PB L 84459 — Tanning of dehaired hides with aluminum salts. Ger. patent application B 205442 IVd/28a, dated Feb 28, 1944. In German. 2.00
Addition to patent application B 202704 IVd/28a.

8986-8989 PB L 84459 — BYK-GULDENWERKE, CHEM. FABRIK A.G. CRANIENBURG/BERLIN. Tanning process. Ger. patent application B 184455 IVd/28a, dated Aug 27, 1938. In German. 2.00

8990-8991 PB L 84459 — CHEM. FABRIK JOH. A. BENCKISER, LUDWIGSHAFEN/RH. Soaking of dry hides and skins of any kind. Ger. patent application C 56416 IVd/28a, Apr 2, 1941. In German. 2.00
Supplement to patent C 55670 IVd/28a.

8992-8997 PB L 84459 — CHEM. FABRIKEN CLEANS TRUMPLER, MORS-TORNESCH. Production and application of highly stable greasing agents for alum, iron, formaldehyde, and chrome tanning. Ger. patent application C 52827 IVd/28a, dated Jun 7, 1937. In German. 2.00

8998-9003 PB L 84459 — STUDIENGESELLSCHAFT DER DEUTSCHEN LEDERINDUSTRIE G.M.B.H., DRESDEN. Processing of material containing tanning agents. Ger. patent application St 63012 IVd/28a, dated Apr 21, 1942. In German. 2.00
Addition to D.R.P. 734416.

9004-9007 PB L 84459 — SEIDEL, J. K.G., GROTTAU. Production of tanning agents from sulfite cellulose waste liquor. Ger. patent application S 160894 IVd/28a, dated Sep 11, 1944. In German. 2.00

9008-9011 PB L 84459 — Production of a fuel for internal combustion engines, motors, etc. from extracted bark. Ger. patent application S 157224 IVd/28a, dated Sep 14, 1943. In German. 2.00

9012-9015 PB L 84459 — STUDIENGESELLSCHAFT DER DEUTSCHEN LEDERINDUSTRIE G.M.B.H., DRESDEN. Tanning of animal hides. Ger. patent application St 61338 IVd/28a, dated Dec 8, 1941. In German. 2.00

9016-9019 PB L 84459 — ZSCHIMMER & SCHWARZ CHEM. FABRIK DOBRILAU GREIZ-DOBRILAU. Greasing agent for leather. Ger. patent application Z 28445, dated Feb 21, 1944. In German. 2.00

9020-9022 PB L 84459 — BARTH, C. and STEIGER, W. (Inventors). Dehairing of skins. Ger. patent application B 185231 VII/28b, dated May 13, 1941. In German. 2.00

9023-9027 PB L 84459 — Bating of dehaired hides with enzymes. Ger. patent application R 115929 IVd/28a, dated Aug 14, 1943. In German. 2.00

9028-9029 PB L 84459 — REIBER, FRANZ (Inventor). Manufacture of leather from internal animal membranes. Ger. patent application R 116996 IVd/28a, dated Aug 30, 1943. In German. 2.00

9030-9031 PB L 84459 — Production of solutions of metal soaps in organic solvents. Ger. patent application Sch 125420 IVd/28a, dated Jul 31, 1942. In German. 2.00

9032-9034 PB L 84459 — ZSCHIMMER & SCHWARZ CHEM. FABRIK DOBRILAU, GREIZ-DOBRILAU. Tanning soap. Ger. patent application Z 27451 IVd/28a, dated Nov 12, 1942. In German. 2.00

9035-9037 PB L 84459 — STUDIENGESELLSCHAFT DER DEUTSCHEN LEDERINDUSTRIE G.M.B.H., DRESDEN. Production of vegetable tanning extracts. Ger. patent application St 61522 IVd/28a, dated Feb 6, 1942. In German. 2.00
Addition to patent St 57610 IVd/28a.

9038-9041 PB L 84459 — NEUBER, FRANZ and MANGOLD, RICH. (Inventors). Production of tanning agents from sulfite waste liquor, etc. Ger. patent application N 47798 IVd/28a, dated May 2, 1944. In German. 2.00

9042-9044 PB L 84459 — Tanning-, liquor- and grain oil. Ger. patent application K 117428 IVd/28a, dated Oct 27, 1943. In German. 2.00

9045 PB L 84459 — BERGHOFF, PAUL (Inventor). Special stretcher for marsh-beaver (nutria) skins. Ger. patent application B 196176, dated Nov 20, 1941. In German. 2.00

9046-9048 PB L 84459 — Bating of fur pelts with enzyme solutions. Ger. patent application R 117085, dated Sep 11, 1943. In German. 2.00

9049-9051 PB L 84459 — HUTSTOFFWERKE LULDA MUTH & CO., FULDA. Mechanical process for the simultaneous production of material for hatmaking and of dehaired skins from small animal skins. Ger. patent application dated Aug 1, 1942. In German. 2.00
This frame follows frame 9045.

9052-9055 PB L 84459 — BILZ, HERMANN. (Inventor). Punching of shoe soles. Ger. patent application B 199735, dated Sep 25, 1942. In German. 2.00

9056-9059 PB L 84459 — ZSCHIMMER & SCHWARZ CHEM. FABRIK DOBRILAU GREIZ-DOBRILAU. Substitution of egg yolk by mineral oil emulsions in the production of kid- or similar leather. Ger. patent application Z 24289 IVd/28a, dated Oct 10, 1939. In German. 2.00

9060-9063 PB L 84459 — Deliming of dehaired hides with alpha-hydroxyisobutyric acid. Ger. patent application R 118841 IVd/28a, dated Jun 1, 1944. In German. 2.00

9064-9070 PB L 84459 — Soaking and liming of skins and hides. Ger. patent application R 119162 IVd/28a, dated Jul 17, 1944. In German. 2.00

9071 PB L 84459 — STRASSER, HEINRICH (Inventor). Apparatus for mechanical extraction and stuffing.

Ger. patent application St 63834, dated Jan 12, 1944. In German. 2.00

9072-9075 PB L 84459 JAEPER, KURT (Inventor). Process for impregnating leather. Ger. patent application J 108596, dated Feb 28, 1941. In German. 2.00

9076-9077 PB L 84459 WEISSER, THEODOR ALFRED (Inventor). Production of a dye from cones of conifercus trees. Ger. patent application W 108199 IVd/28a, dated Dec 9, 1940. In German. 2.00

9078-9082 PB L 84459 Eating of unhaired hides and skins with proteolytical enzymes. Ger. patent application R 112427 IVd/28a, dated Mar 9, 1942. In German. 2.00

9083-9087 PB L 84459 BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Tanning with formaldehyde. Ger. patent application B 200524 IVd/28a, dated Nov 28, 1942. In German. 2.00

9088-9089 PB L 84459 BOEHRINGER & SOEHNE G.M.B.H., FABRIK CHEM. & PHARM PRODUKTE, MANNHEIM-WALDHOF. Deliming tanning aids. Ger. patent application B 200525 IVd/28a, dated Nov 28, 1942. In German. 2.00

9090-9091 PB L 84459 BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Deliming of unhaired hides. Ger. patent application B 200669 IVd/28a, dated Dec 10, 1942. In German. 2.00

9092-9094 PB L 84459 BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Tanning with chrome tanning agents. Ger. patent application B 200784 IVd/28a, dated Nov 11, 1942. In German. 2.00

9095-9097 PB L 84459 BOEHME FETTCHEMIE G.M.B.H., CHEMNITZ. Manufacture of fat-tanned leather. Ger. patent application B 206322 IVd/28a, dated Jun 3, 1944. In German. 2.00

9098-9102 PB L 84459 LAMIC, THEODOR (Inventor). Punching tool for leather. Ger. patent application L 105058 VII/28 6, dated Aug 6, 1941. In German. 2.00
One picture.

9103-9105 PB L 84459 CHEM. FABRIK JOH. A. BENCKISER G.M.B.H., LUDWIGSHAFEN. Deliming of hides and skins. Ger. patent application C 58883 IVd/28a, dated Mar 17, 1944. In German. 2.00

9106-9109 PB L 84459 CHEM. FABRIK JOH. A. BENCKISER G.M.B.H., LUDWIGSHAFEN. Tanning of hides and skins. Ger. patent application C 57374 IVd/28a, dated May 26, 1942. In German. 2.00
Addition to patent 671712, patent application C 52009 IVd/28a.

9110-9111 PB L 84459 CHEM. WERKE ALBERT, WIESBADEN-BIEBRICH. Tanning aids. Ger. patent application C 54748 IVd/28a, dated Feb 1, 1939. In German. 2.00
Addition to patent application C 50169 IVd/28a.

9112-9114 PB L 84459 CHEMISCHE WERKE ALBERT, WIESBADEN-BIEBRICH. Tanning aid. Ger. patent application C 56860 IVd/28a, dated Oct 13, 1941. In German. 2.00
Addition to application C 54748 IVd/28a.

9115-9117 PB L 84459 HENCKEL, KURT (Inventor). Pressure mold for leather, leather substitutes, card board, metal sheets, and other materials. Ger. patent application H 169014, dated Jul 14, 1942. In German. 2.00

9118-9123 PB L 84459 KAYSER'S HUTFABRIK, ULM/DONAU. Removing of hairs, especially from skins of rodents. Ger. patent application K 143542, dated Dec 3, 1938. In German. 2.00
One picture.

9124-9125 PB L 84459 EWERTZ, FRED (Inventor). Hydraulic winch for pressing long tapes. Ger. patent application E 57287 VII/28b, dated May 10, 1943. In German. 2.00
Addition to application E 52685 VII/28b.

9126-9128 PB L 84459 ROHRBACHER LEDERFABRIK JOSEF POESCHL'S SOEHNE, ROHRBACH. Appliance for reducing fibrous materials, particularly leather, to small pieces. Ger. patent application R 115057, dated Dec 28, 1942. In German. 2.00

9129-9131 PB L 84459 KREUZBERGER & KREUZBERGER, BERLIN. Utilization of waste furs as lining for clothing. Ger. patent application K 168857, dated Jun 24, 1943. In German. 2.00

9132-9135 PB L 84459 HUTSTOFFWERKE FULDA RUTH & CO., FULDA. Sorting device for animal hairs. Ger. patent application H 167838, dated Mar 17, 1942. In German. 2.00

9136-9137 PB L 84459 FAUST, ERNST GEBR. (Inventor). Necklace purse made from cellophane and leather. Ger. patent application F 94328 VII/28b, dated Sep 3, 1943, Sep 6, 1943. In German. 2.00
Addition F 94329 VII/28b.

9138-9142 PB L 84459 STUDIENGESELLSCHAFT DER DEUTSCHEN LEDERINDUSTRIE G.M.B.H., DRESDEN. Strengthening of leather. Ger. patent application St 61203, dated Oct 30, 1941. In German. 2.00

9143-9149 PB L 84459 UNITED SHOE MACHINERY CORPORATION PATERSON, NEW JERSEY and BOSTON MASS/U.S.A. Punching machine for leather. Ger. patent application U 14767 VII/28a, dated Jun 1, 1939. In German. 2.00
Addition to application U 14365.

9150-9153 PB L 84459 ROEDEL, JOH. (Inventor). Manufacture of boot-laces from bottom-leather. Ger. patent application R 115928 VII/28b, dated Apr 15, 1943. In German. 2.00

9154-9156 PB L 84459 LUCAS, OTTO (Inventor). Manufacture of leather belts. Ger. patent application L 114170 VII/28b, dated Mar 30, 1944. In German. 2.00

9157-9160 PB L 84459 LINZER GUMMI-, LEDER-, UND TEXTILVERWERTUNGS G.M.B.H., LINZ/DONAU. Manufacture of plaited leather from scrap leather. Ger. patent application L 114166 VII/28b, dated Mar 30, 1944. In German. 2.00

9161-9166 PB L 84459 Production of dehaired hides by using fungus tryptases at neutral to weakly acid reaction. Ger. patent application R 100532 IVd/28a, dated Dec 27, 1940. In German. 2.00

9167-9170 PB L 84459 ROSER, H. GMBH, HELL. (Inventor). Rapid tanning process. Ger. patent application R 109502 IVd/28a, dated Mar 8, 1941. In German. 2.00

9171-9174 PB L 84459 NOMACK, AUG. A.G., BAUTZEN. Process for tanning with synthetic tanning agents. Ger. patent application N 46620 IVd/28a, dated Apr 5, 1943. Inventor: Richard Heesen. In German. 2.00

9175-9177 NEUBEN, FRITZ and MANGOLD, MICH. (Inventors). Tanning agent from sulfite waste liquor or vinasse therefrom with possible recovery of sulfur dioxide. Ger. patent application N 46461 IVd/28a, dated Feb 15, 1943. In German. 2.00
PB L 84459

9178-9179 MAYER, I. & SOHN, OFFENBACH/MAIN. Chrome tanning process. Ger. patent application M 156115 IVd/28a, dated Dec 3, 1942. In German. 2.00
PB L 84459

9180-9184 WOLF, EMIL (Inventor). Punching block for punching leather, etc. Ger. patent application W 11802 VII/28b, dated Oct 10, 1942. In German. 2.00
PB L 84459
Two illustrations.

9185-9188 SCHLEPHACK, HANS (Inventor). Manufacture of belts from smaller patches. Ger. patent application Sch 123992 VII/28b, dated Jan 19, 1942. In German. 2.00
PB L 84459

9189-9193 MUELLER, G. POESCHMANN & CO., DORTMUND. Process and device for applying coloring matter to glass ware to be blown. Ger. patent application M 157612, dated May 15, 1943. In German. 2.00
PB L 84459
One drawing with three sketches.

MACHINERY (EXCEPT ELECTRICAL)

PB L 84462. REICHSPATENTAMT, BERLIN. German patent applications relating to blowers, air pumps, and compressors, etc. (FIAT Microfilm reel F 62, Frames 939-1827) 1936-1944. 889 f. Price: Microfilm-$7.00 - Enlargement print-$90.00
This reel, prepared by FIAT investigators in Germany contains 141 applications of class 27. Individual items are listed below and will be available as enlargement prints. The entire reel may be obtained as a microfilm for $7.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
939-942 PB L 84462	Cleaning of multichamber compressors. Ger. patent application dated Oct 9, 1941. In German.	$2.00
943-946 PB L 84462	ASCHAFFENBURGER ZELLSTOFFWERKE A.G., BERLIN. Process and equipment to obtain a constant vacuum in suction filters. Ger. patent application A 95 814 dated Jun 11, 1942. In German.	2.00
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957-962 PB L 84462	GEBR. BECKER, WUPPERTAL-NICHLINGHAUSEN. Improvement of compressors with a rotor rotating in a housing and equipped with movable slides. Ger. patent application B 178 593 Ia/27c dated Feb 4, 1941. In German.	2.00
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1777-1780 PB L 84462 DAIMLER BENZ A.G., STUTTGART. Vane ring for centrifugal blowers. Ger. patent application D 90 973 dated Jun 11, 1943. In German. 2.00

1781-1782 PB L 84462 DIETERLA, LUDWIG (Inventor). Multiple stage impeller which draws from one side. Ger. patent application D 90 893 dated Jun 1, 1943. In German. 2.00

1783-1786 PB L 84462 DEUTSCHE BABCOCK & WILCOX, DAMPFKESSELWERKE A.G., OBERHAUSEN/RHEINLAND. Centrifugal compressor. Ger. patent application D 90 880 dated May 31, 1943. In German. 2.00

1787-1793 PB L 84462 DEMAG A.G., DUISBURG. Two-staged air-cooled rotary compressor. Ger. patent application D 91 632 dated Sep 15, 1943. In German. 2.00

1794-1801 PB L 84462 DAIMLER BENZ A.G., STUTTGART. Vane ring for superchargers, especially for aircraft engines. Ger. patent application D 91 576 dated Dec 4, 1943. In German. 2.00

1802-1813 PB L 84462 DAIMLER BENZ A.G., STUTTGART. Governor for centrifugal compressors. Ger. patent application D 91 454 dated Aug 16, 1943. In German. 3.00

1814-1820 PB L 84462 Double stage rotary compressor. Ger. patent application D 93 206 dated May 15, 1944. In German. 2.00
Addition to patent D 91 632 Ia/27c.

1821-1827 PB L 84462 EASTMAN KODAK COMPANY, ROCHESTER, N.Y. Diffusion pumps for high vacuum. Ger. patent application E 53 581 Ia/27d dated Apr 20, 1940. In German. 2.00

PB L 84992. REICHSPATENTAMT BERLIN. German patent applications relating to blowers and fans. (FIAT Microfilm Reel F 63, Frames 1828-2240). 1938-1945. 413f. Price: Microfilm -$7.00 - Enlargement prints -$43.00
This reel, prepared by FIAT investigators in Germany, contains 68 applications of class 27. Individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $7.00. Please include PB and frame numbers when ordering individual items. In German.

Frames		Title	Price
1828-1837	PB L 84992	DEUTSCHE VERSUCHSANSTALT FUER LUFTFAHRT E.V. BERLIN-ADLERSHOF. Bucket wheel pump or Root's blower. German patent application D 94510 Ia/27c, dated Jan 29, 1945. In German.	$2.00
1838-1844	PB L 84992	ECK, BRUNO (Inventor). Axial blower. German patent application dated Sep 7, 1938. In German.	2.00
1845-1848	PB L 84992	DEUTSCHE VERSUCHSANSTALT FUER LUFTFAHRT E.V. BERLIN-ADLERSHOF. Adjusting the blade position of hydraulic drives. German patent application D 93422 Ia/27c, dated Jun 8, 1944. In German.	2.00
1849-1850	PB L 84992	DEUTSCHE VERSUCHSANSTALT FUER LUFTFAHRT E.V. BERLIN-ADLERSHOF. Adjusting the blade position of centrifugal compressors. German patent application D 93 421 Ia/27c, dated Jun 10, 1944. In German.	2.00
1851-1856	PB L 84992	HAGEMANN, G. (Inventor). Steam boiler with attached steam engine. German patent application H 166201 Ia/14a, dated Nov 29, 1941. In German.	2.00
1857-1861	PB L 84992	HIRTH-MOTOREN G.M.B.H., STUTTGART-ZUFFENHAUSEN. Fastening the blades of turbines. German patent application H 169359 Ia/27c, dated Aug 31, 1942. In German.	2.00
1862-1864	PB L 84992	HESSENWERK RUDOLF MAJERT G.M.B.H., KASSEL Gas compressor plant. German patent application H 170413 Ia/27b, dated Jan 4, 1943. In German.	2.00
1865-1869	PB L 84992	HOCKSCHER, THEODOR (Inventor). Rotary piston air pump. German patent application H 171437 Ia/27c, dated Apr 22, 1943. In German.	2.00
1870-1873	PB L 84992	MASCHINENFABRIK AUGSBURG-NUERNBERG A.G., AUGSBURG. Blower impeller. German patent application M 145778 Ia/27c, dated Jul 15, 1941. In German.	2.00
1874-1889	PB L 84992	MARTINKA, MICHAEL AND MUELLER, PAUL H. (Inventors). Centrifugal gas compressor. German patent application M 143 584 Ia/27c, dated Dec 8, 1938. In German.	3.00
1890-1894	PB L 84992	MARTINKA, MICHAEL AND MUELLER, PAUL H. (Inventors) Impeller for centrifugal gas compressors. German patent application M 143584 Ia/27c, dated Dec 8, 1938. In German.	2.00
1895-1904	PB L 84992	MASCHINENBAU-AKT. GES VORMALS EHRHARDT & SCHMER MARKTREDWITZ/BAYERN. Device for the infinitely variable regulation of reciprocating piston compressors. German patent application M 143690 Ia/27b, datd May 23, 1940. In German.	2.00
1905-1911	PB L 84992	MARTINKA, MICHAEL AND MUELLER, PAUL H. (Inventors). Centrifugal gas compressor. German patent application M 142 928 Ia/27c, dated Jul 17, 1941. In German.	2.00
1912-1930	PB L 84992	JENDRASSIK, GEORG (Inventor). Process and device for regulating the output of compressor plants. German patent application J 70698 Ia/27b, dated Oct 21, 1941. In German.	3.00
1931-1937	PB L 84992	IRMER & ELZE BAD OEYNHAUSEN. Controller for regulating the output of piston compressors. German patent application J 69742 Ia/27b, dated Jun 3, 1941. In German.	2.00
1938-1941A	PB L 84992	KLEIN, SCHANZLIN & BECKER A.G. FRANKENTHAL PFALZ. Compressor plant with pressure control. German patent application K 161 061 Ia/27b, dated May 10, 1941. In German.	2.00

1942-1949 PB L 84992 KLEMM, KARL (Inventor). Valve for compressors or the like. German patent application K 160810 Ia/27b, dated Apr 12, 1941. In German. 2.00

1950-1951 PB L 84992 KABUS, REINHELD C. (Inventor). Piston for compressors and engines. German patent application K 160863 Ia/27b, dated Apr 22, 1941. In German. 2.00

1952-1954 PB L 84992 KNORR-BREMSE A.G., BERLIN. Device for cooling the compressed air of compressors. German patent application K 159 393 Ia/27b, dated Jul 24, 1941. In German. 2.00

1955-1966 PB L 84992 KNORR-BREMSE A.G., BERLIN. Lubricating device for piston engines and especially for compressors. German patent application K 159540 Ia/27b, dated Dec 13, 1940. In German. 3.00

1967-1980 PB L 84992 Compressor plant with pressure control. German patent application K 152892 Ia/27b, dated Dec 27, 1938. In German. 3.00

1981-1983 PB L 84992 DUFEG, EDUARD (Inventor). Axial blower or pump with inclined impeller blades. German patent application D 87409 Ia/27c, dated Feb 19, 1945. In German. 2.00

1984-2010 PB L 84992 DEUTSCHE WORTHINGTON G.M.B.H., BERLIN-HOHENSCHOENHAUSEN. Air or gas compressor with variable displacement. German patent application D 76943, Ia/27b, dated Dec 28, 1937. In German. 4.00

2011-2016 PB L 84992 DEMAG A.G., DUISBURG. Moveable engine compressor plant. German patent application D 87645 Ia/27b, dated Apr 27, 1942. In German. 2.00

2017-2021 PB L 84992 DUERR, F. (Inventor). Pump, especially for vacuum cleaners. German patent application D 79637 Ia/27b, dated Jan 5, 1939. In German. 2.00

2022-2026 PB L 84992 DIENES, KARL. (Inventor). Check-valve for the pressure line of piston compressors. German patent application D 90182 Ia/27b, dated Mar 8, 1943. In German. 2.00

2027-2028 PB L 84992 CONRAD, FRIEDRICH (Inventor). Rubber valve packing for air pumps. German patent application C 57871 Ia/27b, dated Nov 27, 1942. In German. 2.00

2029-2043 PB L 84992 M.R.A. CHABAG. Piston compressor. German patent application C 57235 Ia/27b, dated Apr 1, 1942. In German. 3.00

2044-2045 PB L 84992 Fan for moving the heat carriers, e.g. hot air in drying chambers etc. German patent application D 90413 Ia/27c, dated Mar 25, 1943. In German. 2.00

2046-2052 PB L 84992 DRAEGERWERK HEINR. U. BERNH. DRAEGER LUEBECK. Helical compressors. German patent application D 90408 Ia/27c, dated Apr 2, 1943. In German. 2.00

2053-2057 PB L 84992 DEMAG A.G., DUISBURG. Stepped piston for multistage high pressure compressors. German patent application D 88646 Ia/27b, dated Sep 3, 1942. In German. 2.00

2058-2062 PB L 84992 DEMAG A.G., DUISBURG. Piston which is set at the free end of the connecting rod. German patent application D 85 647 Ia/27b, dated Sep 3, 1942. In German. 2.00

2063-2071 PB L 84992 GROLL, ROBERT (Inventor). Heat exchanging process and device, especially for refrigeration. German patent application dated Nov 5, 1942. In German. 2.00

2072-2079 PB L 84992 COSYNS, CAMILLE (Inventor) Improvements on rotary or revolving pumps. German patent application C 58246 Ia/27c, dated May 18, 1943. In German. 2.00

2080-2082 PB L 84992 DEMAG A.G., DUISBURG. Device for preventing and starting and stopping of compressors against full load. German patent application D 91089 Ia/27b, dated Jun 28, 1943. In German. 2.00

2083-2085 PB L 84992 DINGLERWERKE A.G., ZWEIBRUECKEN. Hollow steel propeller with reinforcing inner bar. German patent application D 91040 Ia/27c, dated Jun 21, 1943. In German. 2.00

2086-2091 PB L 84992 WITTY, JOSEF (Inventor). High speed refrigerator and air compressor with a large pressure chamber. German patent application W 110415 Ia/27b, dated Feb 11, 1942. In German. 2.00

2092-2097 PB L 84992 WESTFALIA DINNENDAHL GROEPPEL A.G. BOCHUM. Impeller for radial ventilators. German patent application W 110174 Ia/27c, dated Dec 22, 1941. In German. 2.00

2098-2102 PB L 84992 WESTFALIA DINNENDAHL GROEPPEL A.G. BOCHUM. Blower impeller. German patent application W 107331 Ia/27c, dated Jun 5, 1940. In German. 2.00

2103-2108 PB L 84992 WITTY, JOSEF (Inventor). High pressure or vacuum ventilator. German patent application W 111408 Ia/27c, dated Jan 11, 1944. In German. 2.00

2109-2110 PB L 84992 SIEMENS-SCHUCKERTWERKE A.G. BERLIN-SIEMENSSTADT. Rotating piston compressor for refrigerating plants and pumps. German patent application S 158006 Ia/27c, dated Nov 18, 1943. In German. 2.00

2111-2113 PB L 84992 TURBINENFABRIK BRUECKNER, KANIS & CO. DRESDEN. Blade fastening for centrifugal blowers, especially axial compressors. German patent application T 60263 Ia/27c, dated Mar 28, 1944. In German. 2.00

2114-2116 PB L 84992 WYTZE BAYE SMITS KASSEL-WILHELMSHOHE. Spark plug with creeping spark. German patent application S 157102 Ia/27d, dated Sep 4, 1943. In German. 2.00

2117-2124 PB L 84992 SANDER, E. (Inventor). Compressor or pumping device. German patent application S 154157 Ia/27b, dated Feb 12, 1943. In German. 2.00

2125-2128 PB L 84992 SOC. AN. LA MOTOMECCANICA MAILAND. Engine compressor plant for gas, especially for air. German patent application S 156780 Ia/27b, dated Aug 4, 1943. In German. 2.00

2129-2130 PB L 84992 SIEMENS-SCHUCKERTWERKE A.G. BERLIN-SIEMENSSTADT. Rotating piston compressor. German patent application S 158718 Ia/27c, dated Jan 28, 1944. In German. 2.00

2131-2136 PB L 84992 WINKELSTRAETER & SURE MUHLENTAL-MUEHL. Inlet and outlet parts of rotary piston blowers. German patent application W 108092 Ia/27c, dated Jul 12, 1941. In German. 2.00

2137-2141 PB L 84992 WESTFAELISCHE BERGGEWERKSCHAFTSKASSE BOCHUM. Ventilator, especially for subterranean mining. German patent application W 111873 Ia/27c, dated Oct 22, 1942. In German. 2.00

2142-2143 PB L 84992 SORGE, OTTO (Inventor) Process for removing the compression heat of air or gas compressors. German patent appli-

cation S 148744 Ia/27b, dated Feb 4, 1942. In German. 2.00

2144-2156 PB L 84992 SEGERLE, WILH. (Inventor) Process for regulating the air volume of centrifugal blowers. German patent application S 159515 Ia/27c, dated Apr 27, 1944. In German. 3.00

2157-2160 PB L 84992 SCHURZ, FRITZ (Inventor) Automatic air pump for pneumatic tires. German patent application Sch 126967 Ia/27b, dated Mar 8, 1943. In German. 2.00

2161-2164 PB L 84992 ALFRED TEVES G.M.B.H. FRANKFURT/MAIN. Spring for vibration compressors operating in resonance. German patent application T 56680 Ia/27d, dated Feb 3, 1942. In German. 2.00

2165-2167 PB L 84992 ALFRED TEVES G.M.B.H., FRANKFURT/MAIN. Spring for vibration compressors. German patent application T 56871 Ia/27b, dated Feb 3, 1942. In German. 2.00

2168-2172 PB L 84992 ALFRED TEVES G.M.B.H., FRANKFURT/MAIN. Magnetic compressor. German patent application dated Oct 26, 1942. In German. 2.00

2173-2175 PB L 84992 TURBINENFABRIK BRUECKNER, KANIS & CO. DRESDEN. Fastening of impeller blades of centrifugal machines, especially axial compressors. German patent application T 57664 Ia/27c, dated Mar 28, 1944. In German. 2.00

2176-2179 PB L 84992 Lubricating device for compressors. German patent application T 53189 Ia/27b, dated Dec 18, 1939. In German. 2.00

2180-2184 PB L 84992 WEINRICH, HELLMUT (Inventor) Axial compressor. German patent application W 113932 Ia/27c, dated Sep 29, 1943. In German. 2.00

2185-2187 PB L 84992 SCHWARZ, H. (Inventor) Electric device for increasing the maximum pressure of vacuum pumps. German patent application Sch 130113 Ia/27d, dated Nov 16, 1944. In German. 2.00

2188-2192 PB L 84992 WEGEL, RUDOLF (Inventor) Vibrating compressor. German patent application W 113537 Ia/27b, dated Jul 14, 1943. In German. 2.00

2193-2196 PB L 84992 WEINRICH, HELLMUT (Inventor) Radial compressor. German patent application W 113674 Ia/27c, dated Aug 7, 1943. In German. 2.00

2197-2213 PB L 84992 WINKELSTRAETER, GEBR. (Inventor) Blade wheel for centrifugal blowers. German patent application W 113577 Ia/27c, dated Jul 17, 1943. In German. 3.00

2214-2218 PB L 84992 TURBINENFABRIK BRUECKNER, KANIS & CO. DRESDEN. Centrifugal compressor. German patent application T 57424 Ia/27c, dated May 20, 1942. In German. 2.00

2219-2225 PB L 84992 TELEFUNKEN GESELLSCHAFT FUER DRAHTLOSE TELEGRAPHIE M.B.H., BERLIN-ZEHLENDORF. Water resistance with interchangeable electrodes. German patent application T 54692 VIII c/21g, dated Dec 12, 1940. 2.00

2226-2228 PB L 84992 WEINRICH, HELLMUT (Inventor) Blade arrangement for axial compressors. German patent application W 113966 Ia/27c, dated Oct 7, 1943. In German. 2.00

2229-2232 PB L 84992 TURBINENFABRIK BRUECKNER, KANIS & CO. DRESDEN. Diaphragm press. German patent application T 58572 Ia/27b, dated Jan 15, 1943. In German. 2.00

2233 PB L 84992 ZIEGLER, EDUARD, E. (Inventor) Machine operated by levers. German patent application Z 27700 Ia/46 e, dated Feb 8, 1943. In German. 2.00

2234-2237 PB L 84992 Vertical compressor with infinitely variable regulation of output by means of a piston valve. German patent application Z 27079 Ia/27b, dated Jun 11, 1942. In German. 2.00

2238-2240 PB L 84992 NEUMANN & ESSER, AACHEN. Valve device for compressors. German patent application N 48251 Ia/27a, dated Nov 8, 1944. Inventor: Sommerfeldt, Bruno. In German. 2.00

PB L 86417. SAMESREUTHER, RICHARD (Esq.). A soldered connection between flat or slightly curved double walls. (Copy of amended complete specification of British patent application no. 26943/30, dated 9th September 1930). Apr 1931. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The method is to prevent leakage in drying plates for vacuum cupboards and is fully discussed.

MISCELLANEOUS

PB L 73858. I.G. FARBENINDUSTRIE A.G., BOBINGEN, GERMANY. German design patents in various fields. (FIAT Microfilm Reel E-10, Frames 1-940) 1936-1943. 940 f. Price: Microfilm-$6.00 - Enlargement print-$94.00
This FIAT reel consists of 239 design patents covering cameras, films and other photographic accessories, electrical instruments, plastics, textile machinery and other subjects. Individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
1-3 PB L 73858	HAFTA KUNSTSTOFFGESELLSCHAFT, BERLIN. Plastic tube with coat of lacquer consisting of rubber mixed with wax. Registered design 1 527 576/61c dated Jul 10, 1940. In German.	$1.50
4-7 PB L 73858	SCHROTER, MARTIN, BRIEG BEZ. BRESLAU. Portable blueprint apparatus made of flexible material. Registered design 1 527 578/57c dated Jan 22, 1940. In German.	1.50
8-12 PB L 73858	ZEISS IKON A.G., DRESDEN. Picture counting mechanism for cameras, especially movie cameras. Registered design 1 527 587/57a dated Apr 2, 1941. In German.	1.50
13-16 PB L 73858	SIEMENS-SCHUCKERT, BERLIN-SIEMENSSTADT. Thermostat with a double-slotted bimetallic body in the form of a ribbon, supported at three points. Registered design 1 527 589/429 dated Jul 31, 1941. In German.	1.50
17-21 PB L 73858	I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Folding camera with shutter. Registered design 1 527 605/57a dated May 1, 1942. In German.	1.50
22-27 PB L 73858	I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Shutter mounted on the camera. Registered design 1 527 606/57a dated May 1, 1942. In German.	1.50
28-30 PB L 73858	THENERKORN, OSKAR (Inventor). Blueprint apparatus with copying-pad and pressure cloth. Registered design 1527 608/57c dated Jul 13, 1942. In German.	1.50

31-33 PB L 73858 ZEISS, CARL, JENA. Camera, especially moving picture measuring camera for aerial photography. Registered design 1527 609/57a dated Jul 16, 1942. In German. 1.50

34-37 PB L 73858 SCHRÖTER, MARTIN, BRIEG BEZ. BRESLAU. Blueprint apparatus made of a flexible material with clamping device for paper. Registered design 1527 620/57c dated Nov 22, 1940. In German. 1.50

38-43 PB L 73858 BOSCH, ROBERT, G.M.B.H., STUTTGART. Fatigue bending testing device. Registered design 1527 641/42k dated Apr 12, 1937. In German. 1.50

44-46 PB L 73858 ZEISS IKON A.G., DRESDEN. Cassette for small film movie cameras without feed- and take-up sprocket. Registered design 1527 658/57a dated Nov 6, 1941. In German. 1.50

47-50 PB L 73858 ELEKTRIZITÄTSGESELLSCHAFT "SANITAS" M.B.H., BERLIN. Device for photographing the identification card or the like of an inscribing device for fluoroscopic screen picture photography. Registered design 1527 662/57a dated Nov 17, 1941. In German. 1.50

51-53 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Apparatus for testing the cold-resistance of materials. Registered design 1527 694/42k dated Nov 3, 1942. In German. 1.50

54-55 PB L 73858 ARNDT, WALTER (Inventor). Flexible, unbreakable curved ruler of German plastic with variable curves. Registered design 1527 708/42a dated Dec 14, 1942. In German. 1.50

56-58 PB L 73858 JUNKERS FLUGZEUG UND MOTORENWERKE, DESSAU. Defroster pane for vehicles, especially for airplanes, with electric heating. Registered design 1527 714/626 dated Jan 19, 1940. In German. 1.50

59-61 PB L 73858 TELEFON-APPARATE FABRIK E. ZWIETUSCH, BERLIN-CHARLOTTENBURG. Conveyor belt for transporting yarn or film spools or the like. Registered design 1527 721/81e dated Feb 21, 1941. In German. 1.50

62-64 PB L 73858 TELEFON-APPARATE FABRIK E. ZWIETUSCH, BERLIN-CHARLOTTENBURG. Conveyor belt for transporting objects in curves free from vibration. Registered design 1527 725/81e dated Jun 12, 1941. In German. 1.50

65-67 PB L 73858 SIEMENS-REINIGER WERKE, BERLIN. Protection device for an X-ray installation. Registered design 1527 733/30a dated Jan 20, 1942. In German. 1.50

68-70 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G., HAMBURG. Book copying device for reproduction apparatus. Registered design 1527 741/57a dated Jun 15, 1942. In German. 1.50

71-74 PB L 73858 WILHELM, JOHANN (Inventor). Two-piece mold to manufacture plastic teeth. Registered design 1527 745/30b dated Oct 9, 1942. In German. 1.50

75-76 PB L 73858 ARNDT, WALTER (Inventor). Flexible and unbreakable curved ruler of German plastic material. Registered design 1527 997/42a dated Dec 16, 1942. In German. 1.50

77-79 PB L 73858 IHAGES KAMERAWERK STEENBERGEN, DRESDEN. Mirror reflex camera with photoelectric cell. Registered design 1527 836/57a dated Jul 27, 1939. In German. 1.50

80 PB L 73858 WEHR, ELSBETH (Inventor). Foils of thermoplastic resins with fireproof protective layer made of sand, clay, etc. Registered design 1527 848/37a dated Jan 5, 1942. In German. 1.50

81-83 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G., HAMBURG. Copying apparatus with lamps near the copying surface and bottom mirror for lighting the copying surface. Registered design 1527 879/57a dated Dec 15, 1942. In German. 1.50

84-86 PB L 73858 SIEMENS & HALSKE, BERLIN-SIEMENSSTADT. Oscillograph with color filter to decrease the line thickness of graphs. Registered design 1527 980/21c dated Dec 2, 1941. In German. 1.50

87-88 PB L 73858 ARNDT, WALTER (Inventor). Flexible, unbreakable curved ruler of German plastic material. Registered design 1527 998/42a dated Dec 16, 1942. In German. 1.50

89-90 PB L 73858 ARNDT, WALTHER (Inventor). Unilaterally edged, strip-like, unbreakable curved ruler of German plastic material. Registered design 1527 999/42a dated Dec 16, 1942. In German. 1.50

90A-93 PB L 73858 NEW-YORKER-HAMBURGER GUMMIWAREN COMPAGNIE, HAMBURG. Razor blade container of a weldable material, especially of synthetic material, e.g., resin, etc. Registered design 1528 043/69 dated Dec 17, 1942. In German. 1.50

94-96 PB L 73858 GRUSCHWITZ TEXTILWERKE A.G., NEUSALZ ODER. Adjusting device for the extension on wet spinning frames. Registered design 1528 050/76c dated Jan 4, 1943. In German. 1.50

97-100 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Device to indicate or record the short-time average value of a variable rotary velocity. Registered design 1528 059/42o dated Mar 24, 1939. In German. 1.50

101-107 PB L 73858 P.I.V. ANTRIEB WERNER REINERS K.G., BAD HOMBURG A.D.H. Spinning regulator. Registered design 1528 060/76c dated Aug 26, 1939. In German. 1.50

108-110 PB L 73858 FUESS, R., VORM. TREINER U. GEISSLER, BERLIN-STEGLITZ. Photometer. Registered design 1528 071/42h dated Aug 8, 1942. In German. 1.50

111-113 PB L 73858 SCHATTER, WALTER (Inventor). Film feeding device for rollfilm-cameras. Registered design 1528 077/57a dated Oct 23, 1942. In German. 1.50

114-116 PB L 73858 SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Plastic cable sheet consisting of several layers of different plastics. Registered design 1528 101/21c dated Jul 14, 1937. In German. 1.50

117-119 PB L 73858 STUCK-BENZ, EMIL (Inventor). Spool for spinning, yarn, and similar textile machines. Registered design 1528 104/76c dated Dec 3, 1940. In German. 1.50

120-121 PB L 73858 FRÖSTER, PAUL, MASCHINENFABRIK, HANNOVER. Heating sleeve with conic boring for heating headpieces on die casting machines for plastics. Registered design 1528 255/39a dated Sep 12, 1942. In German. 1.50

122-125 PB L 73858 KLANGFILM G.M.B.H., BERLIN. Film camera which runs forwards and backwards and has a braking device. Registered design 1528 119/57a dated Oct 16, 1941. In German. 1.50

126-129 PB L 73858 A.E.G., BERLIN. Coil insulation of cellulose acetate, especially cellulose triacetate and paper in alternating layers. Registered design 1528 162/21g dated Sep 4, 1936. In German. 1.50

130-132 PB L 73858 HALEWICZ, JULIUS (Inventor). Camera for exposures to one color. Registered design 1528 218/57a dated Dec 24, 1942. In German. 1.50

133-136 PB L 73858 BAUER, EUGEN, G.M.B.H., STUTTGART. Liquid-cooled vessel for movie projectors. Registered design 1528 222/57a dated Aug 5, 1937. In German. 1.50

137-140 PB L 73858 KODAK A.G., BERLIN. Back cover fastener on rollfilm cameras or the like. Registered design 1528 223/57a dated Jan 24, 1940. In German. 1.50

141-144 PB L 73858 SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Cable without lead sheath especially for high tension use. Registered design 1528 233/21c dated Jul 26, 1941. In German. 1.50

145-151 PB L 73858 SIEMENS- AND HALSKE A.G., BERLIN-SIEMENSSTADT. Locally variable long-distance communication line with core insulation. Registered design 1528 236/21c dated Jul 31, 1941. In German. 1.50

152-154 PB L 73858 SIEMENS & HALSKE A.G., BERLIN-SIEMENSSTADT. Low capacitance high frequency cable with very thin conductors. Registered design 1528 237/21c dated Jul 31, 1941. In German. 1.50

155-157 PB L 73858 SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Electric conductor with glass fiber insulation and a textile-ribbon-winding. Registered design 1528 238/21c dated Jul 31, 1941. In German. 1.50

158-160 PB L 73858 SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Electric conductor with an insulation of a glass-thread-spinning and one or several glass-threads wound in open windings. Registered design 1528 239/21c dated Jul 31, 1941. In German. 1.50

161-162 PB L 73858 SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Plastic polymerisation apparatus with heating chamber. Registered design 1528 239/21c dated Jul 31, 1941. In German. 1.50

163-167 PB L 73858 VERITEX N.V. NIEW-MILLINGEN, HOLLAND. Device for the continuous manufacture of rubber threads and similar products. Registered design 1528 253/39a dated Jul 31, 1942. In German. 1.50

168-171 PB L 73858 ZEISS-IKON A.G., DRESDEN. Telescopic view finder. Registered design 1528 275/57a dated Mar 1, 1941. In German. 1.50

172-173 PB L 73858 DYNAMIT A.G., TROISDORF BEZ. COLOGNE. Hard, sewable table or plate of transparent thermoplastics or similar material. Registered design 1528 276/39a dated Mar 25, 1941. In German. 1.50

174-176 PB L 73858 ARADO FLUGZEUGWERKE, POTSDAM. Plastic moulding for manufacturing vaulted or spherical bowls, especially for parts of airplanes. Registered design 1528 278/39a dated Jul 31, 1941. In German. 1.50

177-179 PB L 73858 SEYFFERT, EDUARD (Inventor). Shut-off device of rolled or plastic material with exchangeable fitting surface. Registered design 1528 283/47g dated Feb 20, 1942. In German. 1.50

180-183 PB L 73858 DEUTSCHE CELLULOID-FABRIK, EILENBURG. Corrosion-resistant lining of plastic plate material for hollow bodies of any type. Registered design 1528 287/39a dated Jun 19, 1942. In German. 1.50

184-190 PB L 73858 ZEISS-IKON A.G., DRESDEN. Frame view finder arrangement, especially for aerial cameras. Registered design 1528 363/57a dated Feb 13, 1940. In German. 1.50

191-195 PB L 73858 I.G. FARBENINDUSTRIE A.G., WOLFEN. Apparatus for fully automatic developing of photographic papers and films in single sizes. Registered design 1528 365/57c dated Feb 11, 1943. In German. 1.50

196-201 PB L 73858 ZEISS IKON A.G., DRESDEN. Apparatus to adjust weapon-like aiming practice cameras built into a weapon. Registered design 1528 384/57a dated Feb 11, 1943. In German. 1.50

202-207 PB L 73858 RADEBEULER MASCHINENFABRIK, RADEBEUL. Device for multiple layer coating of running strips of paper, film, tissue, etc. Registered design 1528 385/75a dated Jan 21, 1942. Inventor: Köbig. In German. 1.50

208-211 PB L 73858 SCHNEIDER, HUGO, A.G., LEIPZIG. Disc for manufacturing cartridge shells, especially from steel

cut off from a rod. Registered design 1528 429/7c dated Feb 5, 1942. In German. 1.50

212-214 PB L 73858 VIGANO, OFANI (Inventor). Sun glasses formed from a resin plate. Registered design 1528 435/30d dated Jun 1, 1942. In German. 1.50

215-217 PB L 73858 WOLFF & CO., WALSRODE. Matrix to manufacture plastic tubelike objects. Registered design 1528 439/39a dated Sep 23, 1942. In German. 1.50

218-222 PB L 73858 I.G. FARBENINDUSTRIE A.G., WOLFEN. Basket to hold photographic papers or cut film which are to be developed. Registered design 1528 466/57c dated Jul 3, 1940. In German. 1.50

223-225 PB L 73858 SIEMENS & HALSKE A.G., BERLIN-SIEMENSSTADT. Electric conductor with multi-layer insulation. Registered design 1528 471/21c dated Feb 11, 1943. In German. 1.50

226-229 PB L 73858 AUER-GESELLSCHAFT A.G., BERLIN. Medium of uranium metal or its compounds to absorb undesirable X-ray radiation. Registered design 1528 472/21g dated Feb 11, 1943. In German. 1.50

230-231 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Automatically lubricated packing from superpolyamides or superpolyurethanes and graphites. Registered design 1528 487/47f dated Sep 30, 1942. In German. 1.50

232-234 PB L 73858 BRAUNMÜHL, H.J.V. and WEBER, WALTER (Inventors). Protective cover of paperboard for film spools. Registered design 1528 488/57c dated Feb 1, 1942. In German. 1.50

235-237 PB L 73858 VEREINIGTE KOPIERAPPARATE K.G., HAMBURG. Reproduction apparatus for true large-size and small-size pictures. Registered design 1528 497/57a dated Mar 12, 1943. In German. 1.50

238-240 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Device for illuminating vertical photo graph holders on reproduction apparatus. Registered design 1528 494/57c dated Dec 18, 1942. In German. 1.50

241-243 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Multiple reflector for copying apparatus, especially running light blueprinting apparatus. Registered design 1528 495/57c dated Dec 18, 1942. In German. 1.50

244-246 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Device to light cylindrical and semi-cylindrical copying apparatus. Registered design 1528 496/57c dated Dec 18, 1942. In German. 1.50

247-251 PB L 73858 BAUER, EUGEN, G.M.B.H., STUTTGART. Mounting for a filmspool holder. Registered design 1528 516/57a dated Jan 13, 1943. In German. 1.50

252-255 PB L 73858 BAUER, EUGEN, G.M.B.H., STUTTGART. Lantern projector with ventilator. Registered design 1528 522 dated Jan 13, 1943. In German. 1.50

256-257 PB L 73858 TIETZ, HANS (Inventor). Hand and hanging strops with thermoplastic honing surface. Registered design 1528 551/67c dated Dec 21, 1943. In German. 1.50

258-262 PB L 73858 ACHILLES, JOHANN (Inventor). Instrument for developing blueprints by means of ammonia vapors. Registered design 1528 555/57c dated Dec 31, 1943. In German. 1.50

263-268 PB L 73858 ZEISS-IKON A.G., DRESDEN. Film for motion picture photography and reproduction apparatus. Registered design 1528 570/57a dated Feb 5, 1942. In German. 1.50

269-273 PB L 73858 ZEISS IKON A.G., DRESDEN. Waterproof clothing made of oil cloth, plastics, with a rain runoff drain. Registered design 1528 570/57a dated Feb 5, 1942. In German. 1.50

274-283 PB L 73858 I.G. FARBENINDUSTRIE A.G., WOLFEN. Film spool with solid core. Registered design 1528 507/57e dated Feb 18, 1943. In German. 1.50

284-289 PB L 73858 BÖNECKE, ALFRED (Inventor). Frame for transparent pictures. Registered design 1528 611/57c dated Feb 18, 1943. In German. 1.50

290-293 PB L 73858 ZEISS-IKON A.G., DRESDEN. Film cassette for movie cameras with device for locking the film until the cassette is inserted into the camera. Registered design 1528 616/57c dated Feb 18, 1943. In German. 1.50

294-296 PB L 73858 HELM, MAX (Inventor). Paper cutting instrument for blueprint apparatus. Registered design 1528 622/57c dated Feb 18, 1943. In German. 1.50

297-299 PB L 73858 RAVEN, E.H. (Inventor). Projector for colored or black and white diapositives in conjunction with a sound track. Registered design 1528 660/57a dated Feb 18, 1943. In German. 1.50

300-302 PB L 73858 HELM, MAX (Inventor). Paper cutting instrument for blueprint apparatus. Registered design 1528 622/57c dated Feb 18, 1943. In German. 1.50

303-307 PB L 73858 SCHRADER, GÖTZ (Inventor). Foldable protecting tube for mirror reflex cameras. Registered design 1528 671/57a dated Jun 21, 1941. In German. 1.50

308-314 PB L 73858 SCHRADER, GÖTZ (Inventor). "Stereo small film camera" with rotary turret for quick exchange of objectives. Registered design 1528 672/57a dated Jul 5, 1941. In German. 1.50

315-319 PB L 73858 ZEISS IKON A.G., DRESDEN. Cemented color or polarizing filters, consisting of several parallel foils. Registered design 1528 674/57b dated Oct 6, 1941. In German. 1.50

320-324 PB L 73858 DYNAMIT A.G., TROISDORF. Device for manufacturing plastic objects. Registered design 1528 683/39a dated Mar 21, 1942. In German. 1.50

325 PB L 73858 This frame is missing.

326-328 PB L 73858 I. G. FARBENINDUSTRIE A. G. Film spool with hollow core. Registered design 1528 690/57c dated Oct 10, 1942. In German. 1.50

329 PB L 73858 This frame is missing.

330 PB L 73858 This frame is illegible.

331-336 PB L 73858 SCHÄFFER U. BUDENBERG G.M.B.H., MAGDEBURG. Pressure measuring by using the compressibility of liquids. Registered design 1528 721/42k dated Mar 16, 1940. In German. 1.50

337-346 PB L 73858 ZEISS IKON A.G., DRESDEN. Telescope-like collapsible roll-film camera. Registered design 1528 724/57a dated May 31, 1941. In German. 1.50

347-355 PB L 73858 KINLE, ALEX (Inventor). Telescopic collapsible tripod, especially for cameras. Registered design 1528 729/42c dated Feb 18, 1943. In German. 1.50

356-358 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Reflection protection in camera bodies, especially for reproduction purposes. Registered design 1528 735/57a dated Dec 3, 1942. In German. 1.50

359-361 PB L 73858 I.G. FARBENINDUSTRIE A.G., WOLFEN. Case for cut film with a folded flap closing device. Registered design 1528 742/57a dated Feb 18, 1943. In German. 1.50

362-364 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Inset for copying apparatus. Registered design 1528 748/57c dated Dec 16, 1942. In German. 1.50

365-367 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Reproduction apparatus for correct photostatic copies. Registered design 1528 749/57a dated Nov 16, 1942. In German. 1.50

368-371 PB L 73858 BAUER, EUGEN, G.M.B.H., STUTTGART. Fire protection device. Registered design 1528 764/57a dated Feb 13, 1940. In German. 1.50

372-378 PB L 73858 MÜLLER, C.H.F., A.G., HAMBURG. Universal instrument for X-ray diagnosis. Registered design 1528 767/30a dated Sep 18, 1942. In German. 1.50

379-383 PB L 73858 BOSCH, ROBERT, G.M.B.H., STUTTGART. Mechanism which transports the film at intervals. Registered design 1528 822/57a dated Jan 22, 1943. In German. 1.50

384-387 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Fishing line of polyamide wire. Registered design 1528 325/45h dated Mar 28, 1941. In German. 1.50

388-391 PB L 73858 ZEISS IKON A.G., DRESDEN. Device to photograph short and mechanical processes with cathode ray tubes. Registered design 1528 861/57a dated Oct 24, 1941. In German. 1.50

392-403 PB L 73858 FEIT, ULRICH (Inventor). Optical instrument with ground glass. Registered design 1528 902/57a dated Jan 15, 1943. In German. 1.50

404-407 PB L 73858 JIROUCH, AUGUSTIN (Inventor). Fastening device for film reels in cases. Registered design 1528 978/57a dated Jan 23, 1943. In German. 1.50

408-413 PB L 73858 ZEISS IKON A.G., DRESDEN. Carrying device for cameras with case. Registered design 1528 992/57a dated Jan 2, 1941. In German. 1.50

414-416 PB L 73858 AUERGESELLSCHAFT A.G., BERLIN. X-ray cassette. Registered design 1528 994/57a dated May 31, 1941. In German. 1.50

417-419 PB L 73858 PLATE & VÖRSTER, KIERSPE I.W. Thermoplastic writing device with casing. Registered design 1529 006/70d dated Nov 12, 1942. In German. 1.50

420-421 PB L 73858 ZALTENKRICH, E. (Inventor). Hygrometer with pointer balance. Registered design 1529 016/42l dated Jan 13, 1943. In German. 1.50

422-426 PB L 73858 ARNOLD U. RICHTER K.G., MUNICH. View finder on mirror reflex film cameras. Registered design 1529 043/57a dated Jan 19, 1942. In German. 1.50

427-432 PB L 73858 ZEISS IKON A.G., DRESDEN. View finder for still and moving cameras, especially in connection with a range finder. Registered design 1529 037/57a dated Feb 25, 1943. In German. 1.50

433-435 PB L 73858 GASTROW, HANS (Inventor). Plastic receptacle for playing cards. Registered design 1529 072/77d dated Jan 15, 1943. In German. 1.50

436-455 PB L 73858 KODAK A.G., BERLIN. Camera with removable cassette. Registered design 1529 081/57a dated Feb 10, 1943. In German. 2.00

456-458 PB L 73858 BAUNSCHULEN, WERNER (Inventor). Sign stick with changeable artificial resin plate. Registered design 1529 143/45f dated Jan 25, 1943. In German. 1.50

459-462 PB L 73858 UNIVERSUM FILM A.G., BERLIN. Arrangement of the control amplifying tubes in sound reproduction apparatus. Registered design 1529 152/21a dated May 18, 1942. In German. 1.50

463-465 PB L 73858 SIEMENS & HALSKE A.G., BERLIN-SIEMENSSTADT. Electrical con-

denser with covering layers precipitated on the dielectric and fixed current supply strips for improving the stability of capacity. Registered design 1529 326/21g dated Oct 7, 1941. In German. 1.50

466-467 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Measuring device on reproduction apparatus for directly reading the size of the projected frame. Registered design 1529 337/57a dated Jun 22, 1942. In German. 1.50

468-472 PB L 73858 KLANGFILM G.M.B.H., BERLIN. Control device for sound film recording instruments. Registered design 1529 362/42g dated Aug 7, 1940. In German. 1.50

473-476 PB L 73858 SCHALLBAND-SYNDIKAT A.G., BERLIN-CHARLOTTENBURG. Device for mechanical sound recording by means of an endless belt covered with a wax layer. Registered design 1529 365/42g dated Jan 28, 1941. In German. 1.50

477-480 PB L 73858 MASCHINENFABRIKEN TILLM: GERBER SÖHNE U. GEBR. WANSLEBEN, KREFELD. Device for wet treatment, especially for coloring yarn windings according to the creeling system. Registered design 1529 368/8a dated Dec 27, 1941. In German. 1.50

481-482 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Flat copying apparatus consisting of a box with tubular lamps arranged on the sides, bottom mirror and white, reflecting opaque disc. Registered design 1529 387/57c dated Jan 29, 1943. In German. 1.50

483-487 PB L 73858 VOLK, FRITZ U. SOHN, FRANKFURT AM MAIN. Cellulose boiler. Registered design 1529 405/59b dated Aug 13, 1941. In German. 1.50

488-492 PB L 73858 COMPAGNIE FRANCAISE THOMSON-HOUSTON, PARIS. Joint for connecting several film reels. Registered design 1529 417/57a dated Jan 20, 1943. In German. 1.50

493-497 PB L 73858 KODAK A.G., BERLIN. Central lens shutter with flash light synchronizer. Registered design 1529 424/57a dated Mar 6, 1940. In German. 1.50

498-503 PB L 73858 ZEISS, CARL, JENA. Device to examine density fields. Registered design 1529 428/42h dated Apr 3, 1941. In German. 1.50

504-508 PB L 73858 SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Device for simultaneous affixing of two insulating bands on an electric conductor. Registered design 1529 429/21c dated Oct 3, 1941. In German. 1.50

509-510 PB L 73858 FRIEDRICH, ARTHUR (Inventor). Pointer mechanism for measuring instruments. Registered design 1529 434/42d dated May 30, 1942. In German. 1.50

511-512 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Film fastening in the spool slot. Registered design 1529 441/57a dated Oct 10, 1942. In German. 1.50

513-515 PB L 73858 VIERHELLER, GEBR. (Inventor). Device for cleaning cover glasses for diapositives. Registered design 1528 455/57a dated Jan 23, 1943. In German. 1.50

516-517 PB L 73858 VEREINIGTE FOTOKOPIERAPPARATE K.G., HAMBURG. Dimming device for copying apparatus. Registered design 1529 459/57c dated Jan 29, 1943. In German. 1.50

518-519 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Dark room filter inset for dark room lamps. Registered design 1529 460/57c dated Jan 29, 1943. In German. 1.50

520-521 PB L 73858 VEREINIGTE-PHOTOKOPIERAPPARATE K.G., HAMBURG. Condenser for photographic enlargers. Registered design 1529 461/57a dated Jan 29, 1943. In German. 1.50

522-523 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Connection for gas-discharge lamps for photographic use. Registered design 1529 462/57c dated Jan 29, 1943. In German. 1.50

524-525 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G., HAMBURG. Device to develop prints in daylight. Registered design 1529 465/57c dated Feb 2, 1943. In German. 1.50

526-527 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G., HAMBURG. Illumination device for enlargers. Registered design 1529 466/57a dated Feb 3, 1943. In German. 1.50

528-530 PB L 73858 SIEMENS-SCHUCKERTWERKE, BERLIN-SIEMENSSTADT. Groove insulation for electric machinery. Registered design 1529 473/21d dated Jan 31, 1938. In German. 1.50

531-558 PB L 73858 KODAK A.G., BERLIN. Optical copying apparatus for perforated 8 and 16 mm film. Registered design 1529 477/57a dated Jul 21, 1939. In German. 3.00

559-564 PB L 73858 KODAK A.G., BERLIN. Device to lead films and the like. Registered design 1529 479/57c dated Jan 5, 1940. In German. 1.50

565-569 PB L 73858 KODAK A.G., BERLIN. Cassette type movie camera. Registered design 1529 480/57a dated Apr 19, 1940. In German. 1.50

570-573 PB L 73858 SPRINGER, W. (Inventor). Motion picture device for artillery gunnery training. Registered design 1529 506/72f dated Sep 8, 1942. In German. 1.50

574-577 PB L 73858 ZEISS, CARL, JENA. Screen of transparent material for movie studio. Registered design 1529 527/57c dated Feb 5, 1943. In German. 1.50

578-580 PB L 73858 BRANDT, P.F. (Inventor). Stereo ruler with variable base. Registered design 1529 528/57a dated Feb 9, 1943. In German. 1.50

581-583 PB L 73858 — BOSCH, ROBERT, A.G., STUTTGART. Roll type condenser. Registered design 1529 533/21g dated Aug 7, 1936. In German. 1.50

584-586 PB L 73858 — HANSEN, WILHELM & BRAUN, SOLINGEN. Camera case. Registered design 1529 535/57a dated Feb 3, 1939. In German. 1.50

587-590 PB L 73858 — RÜBSAM'S SCHUTZBLÄTTERFABRIK FRANZ GG. RÜBSAM & CO., FULDA. Dress shield. Registered design 1529 551/3b dated Jun 20, 1941. In German. 1.50

591-594 PB L 73858 — SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Flexible, not lead-sheathed, multi-conductor, high power cable with rubber-like insulation and a wire gauze screen, arranged between the strands and the external sheath. Registered design 1529 552/21c dated Sep 6, 1941. In German. 1.50

595-599 PB L 73858 — GASTROW (Inventor). Container for storing pictures between glass panes, especially for protecting color films from dust. Registered design 1529 568/57c dated Oct 30, 1942. In German. 1.50

600-603 PB L 73858 — KNEZD, JOSEF (Inventor). Toy stroboscope. Registered design 1529 571/77f dated Nov 21, 1942. In German. 1.50

604-607 PB L 73858 — FRANKE & HEIDECKE, BRAUNSCHWEIG. Film winding device for rollfilm cameras. Registered design 1529 599/57a dated Aug 25, 1939. In German. 1.50

608-611 PB L 73858 — SCHÖN, H. (Inventor). Magazine for material sensitive to X-rays. Registered design 1529 604/57a dated Mar 12, 1941. In German. 1.50

612-615 PB L 73858 — OPTA RADIO A.G., BERLIN. Electron tube, especially cathode ray tube with hot cathode. Registered design 1529 676/21g dated May 13, 1942. In German. 1.50

616-620 PB L 73858 — ZEISS IKON A.G., DRESDEN. Rollfilm cassette, especially for fluoroscopic photographs on movie film. Registered design 1529 711/57a dated May 4, 1940. In German. 1.50

621-623 PB L 73858 — I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Camera with telescoping lens barrel and built-in electric exposure meter. Registered design 1529 712/57a dated Dec 21, 1940. In German. 1.50

624-629 PB L 73858 — BÜSCHER, F. (Inventor). V-belt made of plastics of high tensile strength. Registered design 1529 715/47d dated Apr 26, 1941. In German. 1.50

630-632 PB L 73858 — HARTMANN & BRAUN A.G., FRANKFURT AM MAIN. Transmitter for remote measurement of liquid levels. Registered design 1529 725/74b dated Aug 7, 1942. In German. 1.50

633-636 PB L 73858 — ZEISS IKON A.G., DRESDEN. Housing for electric measuring-instruments consisting of pressed material, especially for photo-electric exposure meters. Registered design 1529 752/21e dated Jan 18, 1940. In German. 1.50

637-639 PB L 73858 — GHABOWSKY, E.A. (Inventor). Closing strip for cases and receptacles of every kind. Registered design 1529 869/44b dated Feb 19, 1943. In German. 1.50

640-642 PB L 73858 — BEMBERG, I.P., A.G., WUPPERTAL-OBERBARMEN. Spinning nozzle with stop cock for cuprammonium rayon spinning machines. Registered design 1529 917/29a dated Feb 13, 1943. In German. 1.50

643-645 PB L 73858 — UHER & CO., WIEN. Electrical exposure meter with photocell and moving coil instrument. Registered design 1529 922/42h dated Jan 27, 1941. In German. 1.50

646-649 PB L 73858 — UHER & CO., WIEN. Electrical exposure meter with photocell and moving coil instrument adjustable by a resistor. Registered design 1529 923/42h dated Jan 21, 1941. In German. 1.50

650-651 PB L 73858 — WINTZER, FRITZ (Inventor). Precut rolled adhesive strips to frame diapositives in different sizes. Registered design 1529 924/42h dated Aug 11, 1942. In German. 1.50

652-654 PB L 73858 — ZEISS, CARL, JENA. Regulating resistance for electrical devices on optical instruments. Registered design 1529 934/21c dated Oct 25, 1941. In German. 1.50

655-656 PB L 73858 — VEREINIGTE FOTOKOPIERAPPARATE K.G., HAMBURG. Dimming device for illuminating apparatus for blue prints and other photographic uses. Registered design 1529 967/4 57c dated Feb 16, 1943. In German. 1.50

657-660 PB L 73858 — BERSTORFF, HERMANN, MASCHINENBAU-ANSTALT, HANNOVER. Worm press for coating wires, cables, or the like with rubber plastics, thermoplastic masses, etc. Registered design 1529 970/39a dated Feb 6, 1941. In German. 1.50

661-663 PB L 73858 — DEUTSCHE CELLULOID-FABRIK A.G., EILENBURG. Plastic tube with a high capacity for mechanical resistance with metal linings in the tube wall. Registered design 1529 987/47f dated Dec 18, 1942. In German. 1.50

664-665 PB L 73858 — SIEMENS & HALSKE A.G., BERLIN-SIEMENSSTADT. Light-mark-indicating measuring instrument with transparent scale. Registered design 1530 017/42d dated Oct 24, 1941. In German. 1.50

666-669 PB L 73858 — KUFFERATH, JOSEPH (Inventor). Filter stretching, especially for pane and internal filters. Registered design 1530 019/12d dated Jan 31, 1943. In German. 1.50

670-672 PB L 73858 — HEIDENHAIN, J. (Inventor). Plate, consisting of a plastic and a perforated metal layer. Registered

design 1530 071/39a dated Feb 28, 1939. In German. 1.50

673-676 PB L 73858 STEATIT-MAGNESIA A.G., BERLIN-PANKOW. Counter for movie cameras. Registered design 1530 072/57a dated Aug 29, 1939. In German. 1.50

677-680 PB L 73858 SCHULTE, HEINRICH, SÖHNE, ISERLOHNER-HEIDE. Bending device with heater for plastic plates. Registered design 1530 091/39a dated Nov 26, 1942. In German. 1.50

681-683 PB L 73858 SCHULER, WILHELM, FILTRIERSTEINFABRIK EISENBERG. Permanent stamp of porous plastic for printing colored signs on paper or other objects. Registered design 1530 097/15h dated Jan 15, 1943. In German. 1.50

684-686 PB L 73858 SOMBOLD, H.G. (Inventor). Lens shade for cameras. Registered design 1530 108/57a dated Feb 18, 1943. In German. 1.50

687-688 PB L 73858 KUNSTSEIDEN A.G., WALDNIEL. Effect yarn consisting of crepe yarn with S-twist and crepe yarn with Z-twist. Registered design 1530 115/76c dated Feb 24, 1943. In German. 1.50

689-691 PB L 73858 ZEISS IKON A.G., DRESDEN. Housing for a film developing automat consisting of a cylindrical box. Registered design 1530 122/57c dated Sep 8, 1941. In German. 1.50

692-695 PB L 73858 ZEISS IKON A.G., DRESDEN. Stereo camera for large exposure bases with electric remote control. Registered design 1530 125/57a dated Aug 6, 1942. In German. 1.50

696-699 PB L 73858 GRUSCHWITZ MASCHINENFABRIK A.G., OLBERSDORF. Slit roll for engines to cut continuous synthetic fiber ropes into piles of a pre-determined length. Registered design 1530 131/29a dated Feb 6, 1943. In German. 1.50

700-702 PB L 73858 KORKSTEINFABRIK C & E MAHLA, NÜRNBERG. Insulating body or plate of synthetic resin-foam flakes. Registered design 1530 154/37b dated Oct 24, 1941. In German. 1.50

703-710 PB L 73858 HOUSTON, C.F. THOMSON (Inventor). Contrivance in a film viewing or film projecting apparatus to hold and to lead films in rolls or single or little connected piles of strips of limited length. Registered design 1530 240/57a dated Mar 26, 1942. In German. 1.50

711-714 PB L 73858 ASTRO GESELLSCHAFT BISLICKE, BERLIN-NEUKÖLLN. Long range camera movably fixed in a fork, with guide track for balancing attached devices. Registered design 1530 260/57a dated Mar 2, 1943. In German. 1.50

715-717 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Device for observing the bleaching process on blue print papers. Registered design 1530 328/57b dated Jan 12, 1943. In German. 1.50

718-721 PB L 73858 SCHULTZ, M. (Inventor). Identification disc for X-ray exposures made of lead foil with paper envelope. Registered design 1530 357/57a dated Mar 2, 1943. In German. 1.50

722-724 PB L 73858 AYSCHE, F. (Inventor). Container for viewing exposed reels. Registered design 1530 358/57c dated Mar 5, 1943. In German. 1.50

725-732 PB L 73858 KODAK A.G., BERLIN. Film transporting device for movie cameras. Registered design 1530 365/57e dated Jan 5, 1940. In German. 1.50

733-734 PB L 73858 KORTE, ADOLF (Inventor). Tube of substitute material with a conical body. Registered design 1530 413/K1. 81c dated Feb 10, 1943. In German. 1.50

735-738 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Magazine for reproduction cameras. Registered design 1530 441/K1 57a dated Jul 10, 1941. In German. 1.50

739-741 PB L 73858 SIEMENS & HALSKE A.G., BERLIN-SIEMENSSTADT. Device consisting of electrically heated soldering iron, for welding plastics. Registered design 1530 443/21h dated Mar 6, 1943. In German. 1.50

742-745 PB L 73858 ZEISS IKON A.G., DRESDEN. Arrangement of film reel branches on film cameras. Registered design 1530 445/57a dated Dec 6, 1940. In German. 1.50

746-749 PB L 73858 DECKEL, F. (Inventor). Arrangement to regulate the exposure on projectors. Registered design 1530 452/57a dated Jul 24, 1941. In German. 1.50

750-752 PB L 73858 LORENZ, C., A.G., BERLIN. Multi-stage electron-optical image converter. Registered design 1530 494/21g dated Jul 28, 1938. In German. 1.50

753-756 PB L 73858 TOBIS TONFILM-SYNDIKAT, BERLIN. Device for maintaining the constant temperature of photochemical liquids by means of temperature regulator. Registered design 1530 510/57c dated Apr 7, 1942. In German. 1.50

757-759 PB L 73858 WEGELIN & HÜBNER, HALLE. Gear box for rayon and rayon staple spinning machines. Registered design 1530 547/29a dated Mar 4, 1943. In German. 1.50

760-765 PB L 73858 LORENZ, A.G., BERLIN. Cathode ray image scanner for television. Registered design 1530 555/21a dated Oct 27, 1938. In German. 1.50

766-768 PB L 73858 GEWERKSCHAFT KERAMCHEMIE-BERGGARTEN, SIERSHALM. Hand-operated instrument to heat or weld plastic foils. Registered design 1530 637/4g dated Nov 3, 1942. In German. 1.50

769-775 PB L 73858 ASKANIA-WERKE, BERLIN. Rotary diaphragm shutter for film theodolites. Registered design 1530 733/57a dated Aug 12, 1938. In German. 1.50

776-777 PB L 73858 FUNK, OSKAR (Inventor). Wire or band of polyamide for tennis

rackets and tennis net stretching. Registered design 1530 788/77a dated Feb 27, 1943. In German. 1.50

778-780 PB L 73858 DEUTSCHE GOLD UND SILBER-SCHEIDE-ANSTALT, FRANKFURT AM MAIN. Spinning nozzle head with several flat spinnerets or small spinning plates. Registered design 1530 793/29a dated Mar 6, 1943. In German. 1.50

781-783 PB L 73858 SEISMOS G.M.B.H., HANNOVER. Adjustable ball and socket tripod head. Registered design 1530 802/42c dated Dec 24, 1941. In German. 1.50

784-786 PB L 73858 BRANDT, P.F. (Inventor). Optical exposure meter based on the principle of gray wedges. Registered design 1530 803/42h dated Oct 10, 1942. In German. 1.50

787-789 PB L 73858 SIEGLING, E. (Inventor). Drive belt according to patent No. 699 693. Registered design 1530 871/47d dated Sep 2, 1941. In German. 1.50

790-792 PB L 73858 PAFFHAUSEN, K. (Inventor). Synthetic resin or pressed material door handle. Registered design 1530 880/39b dated Nov 20, 1942. In German. 1.50

793-795 PB L 73858 REINHOLD, E. (Inventor). Photoelectric exposure meter with special adjustment for color exposures. Registered design 1530 884/57a dated Feb 3, 1943. In German. 1.50

796-800 PB L 73858 REINHOLD, E. (Inventor). Diapositives container. Registered design 1530 893/57c dated Feb 3, 1943. In German. 1.50

801-804 PB L 73858 FOEKE-WULF G.M.B.H., BREMEN. Multi-layer glass pane for vehicles and aircraft. Registered design 1530 902/39a dated Feb 18, 1941. In German. 1.50

805-806 PB L 73858 WIPPERMANN, F. (Inventor). Feltlike plate, made of reed, for sound absorption, insulating purposes, etc. Registered design 1530 933/39b dated Jan 14, 1943. In German. 1.50

807-809 PB L 73858 EILFELD, FRIEDRICH, G.M.B.H., GROBZIG. Spinneret with detachable hand for producing rayon and artificial wool. Registered design 1530 957/29a dated Mar 16, 1943. In German. 1.50

810-812 PB L 73858 BÜSSING-NAG, BRAUNSCHWEIG. Defroster glass plates for motor vehicles. Registered design 1530 981/63c dated Dec 28, 1942. In German. 1.50

813-820 PB L 73858 KODAK A.G., BERLIN. Camera with inset magazine provided with a locking device for avoiding fogging of the film while exchanging the camera. Registered design 1531 015/57a dated Oct 4, 1940. In German. 1.50

821-823 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Film spool with feeding guides. Registered design 1531 018/57a dated Apr 23, 1941. In German. 1.50

824-826 PB L 73858 WEIGELT, OTTO (Inventor). Space saving glass balloon shipping box of wood. Registered design 1531 931/81c dated Aug 5, 1942. In German. 1.50

827-830 PB L 73858 BERLINER KINDL BRAUEREI A.G., BERLIN. Remote water level indicator with electric indication. Registered design 1531 036/74b dated Jan 12, 1943. In German. 1.50

831-833 PB L 73858 HINTSCHES, K., OBERKOTZAU. Pressure cylinder for plastics designed for printing on fabrics, paper, etc. Registered design 1531 069/8c dated Mar 9, 1943. In German. 1.50

834-836 PB L 73858 BERNSTEIN, E. (Inventor). Sausage casing of paper or other substitutes. Registered design 1531 128/66b dated Aug 1, 1942. In German. 1.50

837-839 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Impressing device for photographic prints made of polymerization plastics. Registered design 1531 152/57c dated Aug 4, 1942. In German. 1.50

840-841 PB L 73858 EG-GM-WERKE GÜNTHER'S SÖHNE G.M.B.H., DRESDEN. Brush for finishing, etc. Registered design 1531 220/75c dated Mar 23, 1943. In German. 1.50

842-849 PB L 73858 LEITZ, E., G.M.B.H., WETZLAR. Film counter for rollfilm cameras. Registered design 1531 225/57a dated Feb 10, 1940. In German. 1.50

850-853 PB L 73858 ZEISS, CARL, JENA. Polarizing device for use in fogs. Registered design 1531 235/42h dated Jul 7, 1942. In German. 1.50

854-856 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Reproduction apparatus for books. Registered design 1531 242/57a dated Feb 16, 1943. In German. 1.50

857-858 PB L 73858 VEREINIGTE PHOTOKOPIERAPPARATE K.G., HAMBURG. Photo printing apparatus and blueprint apparatus with desk-like contact surface. Registered design 1531 243/57c dated Feb 16, 1943. In German. 1.50

859-862 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G., HAMBURG. Fixing device for reproduction devices for locking the camera carriage. Registered design 1531 244/57a dated Feb 16, 1943. In German. 1.50

863-864 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G., HAMBURG. Device for film and paper drying cabinets with movable clamping device for hanging films. Registered design 1531 248/57c dated Mar 4, 1943. In German. 1.50

865-866 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G., HAMBURG. Device on contact printers for preventing the dropping of blueprint paper. Registered design 1531 247/57c dated Feb 26, 1943. In German. 1.50

867-869 PB L 73858 BERGEDORFER EISENWERK A.G., HAMBURG. Consistency im-

proving device made of a double-walled hollow body, for plastic masses as butter, margarine, etc. Registered design 1531 300/45g dated Mar 30, 1943. In German. 1.50

870-871 PB L 73858 ROTHOFT, FRIEDRICH (Inventor). Nonsliding conveyor belt drive with operating belt. Registered design 1531 258/81c dated Mar 24, 1943. In German. 1.50

872-874 PB L 73858 SIEMENS & HALSKE, BERLIN-SIEMENSSTADT. Arrangement to regulate the emission current of the ray producer in a corpuscular ray apparatus, especially an electron microscope. Registered design 1531 308/21g dated Dec 2, 1941. In German. 1.50

875-876 PB L 73858 ZEISS IKON A.G., DRESDEN. Illumination installation, especially for projection purposes. Registered design 1531 368/42h dated Sep 17, 1941. In German. 1.50

877-881 PB L 73858 ZEISS IKON A.G., DRESDEN. Stereo viewing glasses according to the filter method. Registered design 1531 370/42h dated Nov 15, 1941. In German. 1.50

882-883 PB L 73858 FISCHER, RUDOLF (Inventor). Measuring instrument holder. Registered design 1531 383/42i dated Feb 9, 1943. In German. 1.50

884-891 PB L 73858 KODAK A.G., BERLIN. Small roll-film camera with focal plane shutter. Registered design 1531 396/57a dated Jan 5, 1940. In German. 1.50

892-894 PB L 73858 BUSCH, EMIL, A.G., RATHENOW. Optical instrument, especially for observing and recording with nonreflecting optical surfaces. Registered design 1531 435/42h dated Feb 11, 1941. In German. 1.50

895-897 PB L 73858 SIEMENS-SCHUCKERT A.G., BERLIN-SIEMENSSTADT. Multilayer insulation for open and half-open grooves of electric machines and apparatus. Registered design 1531 437/21d dated Dec 3, 1941. In German. 1.50

898-901 PB L 73858 HAHN, GUIDO (Inventor). Apparatus to regulate the voltage of the wire netting(yarns) to be measured. Registered design 1531 473/42k dated Sep 16, 1943. In German. 1.50

902-903 PB L 73858 KALLE & CO., WIESBADEN. Thread guide for winding thread on spools. Registered design 1531 477/76d dated Mar 27, 1943. In German. 1.50

904-909 PB L 73858 KODAK A.G., BERLIN. Glueing machine. Registered design 1531 482/54d dated May 23, 1939. In German. 1.50

910-914 PB L 73858 SCHENCK, CARL, G.M.B.H., DARMSTADT. Arrangement for measuring torques of rotating shafts by means of an interposed planetary gear. Registered design 1531 486/42k dated Sep 12, 1940. In German. 1.50

915-917 PB L 73858 MASCHINENBAU HONSEL U. CO., BIELEFELD. Contrivance to fix longitudinal adhesive strips on the paper on hose-drawing machines. Registered design 1531 523/54c dated Mar 24, 1943. In German. 1.50

918-919 PB L 73858 LEITZ, E., G.M.B.H., WETZLAR. Stereo camera with two objectives and partial pictures which are side by side and need not be cut to be viewed. Registered design 1531 548/57a dated Sep 12, 1942. In German. 1.50

920-922 PB L 73858 SCHMECK, PAUL (Inventor). Conveyor belt for blueprint developing and drying apparatus. Registered design 1531 578/57c dated Apr 5, 1943. In German. 1.50

923-925 PB L 73858 OPTISCHE WERKE G. RODENSTEIN, MUNICH. Range finder, especially for cameras. Registered design 1531 588/57a dated Nov 15, 1941. In German. 1.50

926-927 PB L 73858 HEINKEL, E., G.M.B.H., WIEN. Measuring arrangement to measure profiles. Registered design 1531 589/42b dated Nov 22, 1941. In German. 1.50

928-930 PB L 73858 BRANDENBURGER, K. (Inventor). Plastic sponge with cover. Registered design 1531 590/39a dated Feb 28, 1942. In German. 1.50

931-932 PB L 73858 I.G. FARBENINDUSTRIE A.G., FRANKFURT AM MAIN. Hollow body of organic plastics with upset groove. Registered design 1531 596/39a dated Nov 18, 1942. In German. 1.50

933-937 PB L 73858 SCHWARZ & CO., HAMBURG. Cover which is elastic and stable against internal pressure, especially for foot-gear, bags or the like. Registered design 1531 612/71a dated Feb 13, 1943. In German. 1.50

938-939 PB L 73858 VEREINIGTE PHOTOKOPIER-APPARATE K.G. HAMBURG. Dimming screen for radiation lamps for uniform lighting. Registered design 1531 712/21f dated Jan 29, 1943. Inventor: Böger. In German. 1.50

940 PB L 73858 HITSCHLER, G., DRAHTGEWEBE UND GEFLECHTWERK-SIEBFABRIK, LANDAU-PFALZ. Hair or fiber sieve bottom for various sieves. Registered design 1531 726/50d dated Mar 26, 1943. In German. 1.50
Incomplete.

PB L 90191. REICHSPATENTAMT, BERLIN. Patent specifications relating to machine tools and musical instruments. (BIOS Microfilm Reel FD 836/46, Frames 1-350; BIOS/DOCS/2194/2) 1938-1945. 260 f. Price: Microfilm-$7.00 - Enlargement print-$27.00
In German.

PB L 90191-S. REICHSPATENTAMT, BERLIN. Patent specifications relating to machine tools and musical instruments. (BIOS Microfilm Reel FD 836/46, abstract) 1938-1945. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
In English.

PB L 90053. WALTER, FRITZ. Patent matters: Correspondence. (BIOS Microfilm Reel FD 385/46, Frames not numbered; BIOS/DOCS/ADI (K) (137/88, 138/29, 139/27)) 1934-1944. 1051 f. Price: Microfilm-$7.00 - Enlargement print-$107.00
In German, French and Italian.

PB L 90053-S. WALTER, FRITZ. Patent matters: Correspondence. (BIOS Microfilm Reel FD 385/46, abstract). 1934-1944. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
In English.

TECHNICAL ORDERS

TRANSPORTATION EQUIPMENT

AERONAUTICS

Aircraft

PB L 53957-R2. U. S. ARMY AIR FORCES. Erection and maintenance instructions for Army model F-15A airplanes. (Partial revision of PB 53957; for additional partial revision see PB 53957-R). (Tech Order AN 01-15JA-2, rev.). Mar 1947. 93 p. Price: Microfilm-$2.00 - Photostat-$3.00

PB L 85213. U. S. ARMY AIR FORCES. Parts catalog for model L-13A airplane. (Tech Order AN 01-5DAA-4). May 1947. 133 p. Price: Microfilm-$4.25 - Photostat-$13.00.

PB L 81779. U. S. ARMY AIR FORCES. Parts catalog for power brake valves, part nos. 11288, 11288A and 11288B (Warner Aircraft). (Tech Order AN 03-25GCA-2). May 1947. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81769. U. S. ARMY AIR FORCES. Parts catalog for Stratopower hydraulic pumps model series 67V190, 67V200, and models 682C1Y and 682C1 (New York Air Brake). (Tech Order AN 03-30CS-2). Apr 1947. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 87177. U. S. ARMY AIR FORCES. Parts catalog for tail wheels. (Firestone). (Tech Order AN 03-25BD-2). Sep 1947. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 55549-R5. U. S. ARMY AIR FORCES. Parts catalog for YR-13 helicopters. (Partial revision of PB 55549) (Tech Order AN 01-110HAA-4, rev.) May 1947. 70 p. Price: Microfilm-$2.00 - Photostat-$5.00

PB L 55549-R6. U. S. ARMY AIR FORCES. Parts catalog for YR-13 helicopters. (Partial revision of PB 55549) (Tech Order AN 01-110HAA-4, Supp) Jun 1947. 19 p. Price: Microfilm-$2.00 - Photostat-$6.00

PB L 55549-R7. U. S. ARMY AIR FORCES. Parts catalog for YR-13 helicopters. (Partial revision of PB 55549) (Tech Order AN 01-110HAA-4) Sep 1947. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81919. U. S. ARMY AIR FORCES. Pilot's handbook for Army models AT-6D, AT-6F; Navy models SNJ-5, SNJ-6 airplanes. (Tech Order 01-60FF-1). Aug 1947. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 87532. U. S. ARMY AIR FORCES. Pilot's handbook for Army model L-17A airplanes. (Tech Order AN 01-60AA-1). Aug 1947. 26 p. Price: Microfilm-$1.50 - Photostat-$3.00

PB L 81930. U. S. ARMY AIR FORCES. Pilot's handbook of flight operating instructions for YP-80A airplanes. (Tech Order 01-65BJA-1). Dec 1946. 41 p. Price: Microfilm-$2.00 - Photostat-$5.00

PB L 46884-R. U. S. ARMY AIR FORCES. Replacement of diluter demand oxygen regulators, types A-12 and AN6004-1 - all aircraft. (Supersedes PB 46884) (Tech Order 01-1-275, rev.) Apr 1947. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 87202. U. S. AIR FORCE. Sikorsky: Installation of oil seal and cup in clutch assembly - YR-5A, R-5A, and H02S-1. (Tech Order 01-230HB-11). Oct 1947. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81946. U. S. ARMY AIR FORCES. Sikorsky - Modification of main gear boxes-R-5 series and H02S-1. (Tech Order 01-230HB-19). Aug 1947. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81946-S. U. S. ARMY AIR FORCES. Sikorsky - modification of main gear boxes - R-5 series and H02S-1. (Supplement to PB 81946). (Tech Order 01-230HB-19A, Supp.). Sep 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81222. U. S. ARMY AIR FORCES. Sikorsky-replacement of landing gear torque link bolts-YR-5A, YR-5D, YR-5E, R-5a and R-5D. (Tech Order 01-230H3-16). Apr 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00.

PB L 85214. U. S. ARMY AIR FORCES. Pilot's handbook for Army models R-5 A, D, E and F; Navy model HO2S-1 helicopters. (Tech Order AN 01-230HR-1) Jul 1947. 34 p. Price: Microfilm-$1.75 - Photostat-$4.00

PB L 31242-R. U. S. ARMY AIR FORCES. Structural repair instructions for Army model AT-6 series, Navy model SNJ series airplanes. (Revision of PB 31242). (Tech Order AN 01-60F-3). Sep 1947. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 41299-R. U. S. ARMY AIR FORCES. Structural repair instructions for Army model C-82 A airplanes. (Supersedes PB 41299, July 25, 1945). (Tech Order AN 01-115CBA-3). Mar 1947. 191 p. Price: Microfilm-$4.00 - Photostat-$13.00.

PB L 41299-R2. U. S. ARMY AIR FORCES. Structural repair instructions for Army model C-82A airplanes. (Partial revision of PB 41299). (Tech Order AN 01-115CBA-3, rev.). Jul 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 85211. U. S. ARMY AIR FORCES. Structural repair instructions for L-13A airplanes. (Tech Order AN 01-50J-3) May 1947. 99 p. Price: Microfilm-$3.25 - Photostat-$10.00.

PB L 41731-R2. U. S. ARMY AIR FORCES. Structural repair instructions for models P-80A, P-80B and FP-80A airplanes. (Partial revision of PB 41731; for additional partial revision see PB 41731-R) (Tech Order 01-75FJ-3, rev.) Apr 1947. 90 p. Price: Microfilm-$2.00 - Photostat-$6.00

PB L 81220. U. S. ARMY AIR FORCES. Structural repair instructions for models P-82B, P-82E, P-82F, and P-82G airplanes. (Tech Order AN 01-60JJ-3. Feb 1946. 140 p. Price: Microfilm-$4.25 - Photostat-$14.00.

PB L 55548-R. U. S. ARMY AIR FORCES. Structural repair instructions for model YR-13 helicopters. (Partial revision of PB 55548) (Tech Order AN 01-110HA-3, rev.) Jan 1947. 29 p. Price: Microfilm-$1.00 - Photostat-$2.00

PB L 55548-R-2. U. S. ARMY AIR FORCES. Structural repair instructions for Army model YR-13, Navy model HTL-1 helicopters. (Revision of PB 55548). (Tech Order AN 01-110HA-3). Sep 1947. 17 p. Price: Microfilm-$1.00- Photostat-$2.00

PB L 46901-R. U. S. ARMY AIR FORCES. Tail-down weighing procedures for AAF aircraft. (Supersedes PB 46901) (Tech Order 01-1B-47, rev.) Mar 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 39697-R. U. S. ARMY AIR FORCES. Unit costs of aircraft and engines. (Supersedes part of PB 39697). (Tech Order 00-25-30). Aug 1947. 11 p. Price: Microfilm-$1.00 - Photostat-$1.00

Instruments

PB L 34517-R4. U. S. ARMY AIR FORCES. Army Air Forces instrument letdown procedures, corrected to include Airman's Guide, vol. 2, No. 7, Jun 24, 1947. (Supersedes PB 34517-R3) (Tech Order 08-15-3, rev.) Jul 1947. 141 p. Price: Microfilm-$3.00 - Photostat-$10.00

PB L 42672-R. U. S. ARMY AIR FORCES. General interchangeability of aircraft instruments. (Revision of PB 42672). (Tech Order 05-1-21). Sep 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 42702-R. U. S. AIR FORCE. General: Lubrication of air-driven gyro instrument and automatic pilot for bearings. (Revision of PB 42702). (Tech Order 05-1-30). Jan 1948. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 62554-R2. U. S. AIR FORCE. Handbook maintenance instructions. Radio compass AN/ARN-6. (Airborne Radio Navigational Instrument) (Revision of PB 62554) (Tech Order AN 16-30ARN6-3, rev.) Oct 1947. 26 p. Price: Microfilm-$1.00 - Photostat-$2.00

PB L 53906-R2. U. S. AIR FORCE. Handbook operating instructions: Radio compass AN/ARN-6. (Airborne Radio Navigational Instrument). (Revision of PB 53906). (Tech Order AN 16-30ARN6-2). Oct 1947. 15 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 42584-R. U. S. AIR FORCE. Handbook operation and service instructions: Sensitive altimeters AAF types, C-12, C-12A, C13, C-16 AN types; 5760-1, -2, -4, -12, -12A, -12A, Navy stock numbers; R88-A-335, R88-A-350, R88-A-350-10, R88-A-350-11, R88-A-351. (Kollsman). (Revision of PB 42584). (Tech Order AN 05-30-16). Oct 1947. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 87170. U. S. AIR FORCE. Handbook overhaul instructions: Automatic electric turbo regulators, types C-10 and C-11-A. (General Electric). (Tech Order AN 01-10GA-32). Nov 1947. 44 p. Price: Microfilm-$2.00- Photostat-$5.00

PB L 87197. U. S. AIR FORCE. Handbook overhaul instructions: Magnesyn fuel pressure indicator, Army type G-2, magnesyn fuel pressure transmitter, Army type E-4, (Eclipse-Pioneer). (Tech Order AN 05-70D-8). Oct 1947. 34 p. Price: Microfilm-$1.75 - Photostat-$4.00

PB L 86979. U. S. AIR FORCE. Handbook, overhaul instructions: Type A-1 watt-varmeter (General Electric). (Tech Order AN 05-80A-3). Nov 1947. 38 p. Price: Microfilm-$1.75 - Photostat-$4.00

PB L 87505. U. S. AIR FORCE. Handbook overhaul instructions: Type AN 5771T7A hydraulic pressure gage. (U. S. Gauge). (Tech Order AN 05-70F-6). Dec 1947. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 80510. U. S. ARMY AIR FORCES. Lockheed - Modification of radio compass loop installation and loop recalibration - PF-80A-5. (Tech Order 01-75JA-2R-4). May 1947. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81945. U. S. ARMY AIR FORCES. Lockheed: Modification of tachometer indicators- P-80A, PF-80A, and P-80B. (Tech Order 01-75FJ-26). Aug 1947. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 42591-R3. U. S. ARMY AIR FORCES. Operating instructions: Army types E-6B and AN 5835-1, Navy type R 88-C-1120 dead reckoning computer. (Partial revision of PB 42591). (Tech Order 05-35-9, Rev.). May 1947. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 87553. U. S. ARMY AIR FORCES. Operation and service instructions for electric bank and turn indicator, type D-3. (Schwien). (Tech Order AN 05-20HE-1). Jun 1947. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 34505-R-2. U. S. ARMY AIR FORCES. Operation and service instructions for fuel level gages. (Liquidometer). (Revision of PB 34505). (Tech Order AN 05-65A-5). Aug 1947. 40 p. Price: Microfilm-$1.00 - Photostat-$3.00

PB L 81796. U. S. ARMY AIR FORCES. Operation and service instructions for Intervalometer type B-5A. (Manufactured by Abrams Instrument Corp., Lansing, Mich.). (Tech Order AN 10-10AC-3). Jun 1947. 17 p. Price: Microfilm-$1.25 - Photostat-$2.00

PB L 42901-R. U. S. ARMY AIR FORCES. Operation and service instructions for true airspeed indicator, type G-1. (Kollsman). (Revision of PB 42901). (Tech Order AN 05-10-18). Jun 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 44394-R. U. S. ARMY AIR FORCES. Operation, service and overhaul instructions, with parts catalog, for engine gage units, types AN5773-1A, AN5773T2 and AN5773-2, Navy stock nos. R88-G-1020-10 and R88-G-1021-50 (Edison). (Revision of PB 44394). (Tech Order AN 05-75AB-1, Rev.). Jul 1947. 28 p. Price: Microfilm-$1.00 - Photostat-$2.00

PB L 42663-R. U. S. ARMY AIR FORCES. Operation, service and overhaul instructions, with parts catalog, for type G-1750 vacuum pump. (Liberty Motors Engineering Corp.). (Partial revision of PB 42663). (Tech Order 05-1-7, rev.). Jul 1947. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 46332-R3. U. S. ARMY AIR FORCES. Overhaul instructions for automatic pilot type G-1, model 2CJ1A1 (General Electric). (Partial revision of PB 46332; for additional partial revisions see PB 46332-R and PB 46332-R2) (Tech Order AN 05-45AB-2, rev.) Jun 1947. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 87529. U. S. ARMY AIR FORCES. Overhaul instructions for direct reading fuel gages, models 150L and 150M2 direct reading oil gages, models 111-150 and 106-FA and direct reading anti-icing fluid gage, model 106-FA-H. (Tech Order 05-65AC-1). Sep 1947. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81789. U. S. ARMY AIR FORCES. Overhaul instructions for electric bank and turn indicator, type D-3 (Schwien) (Tech Order AN 05-20HE-2). Jun 1947. 18 p. Price: Microfilm-$1.25 - Photostat-$2.00

PB L 44368-R. U. S. ARMY AIR FORCES. Overhaul instructions for fuel flowmeters, class 30. (Neptune Meter Co.). (Partial revision of PB 44368). (Tech Order AN 05-65EA-2, rev.). Jul 1947. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 81797. U. S. ARMY AIR FORCES. Overhaul instructions for Intervalometer type B-5A. (Manufactured by Abrams Instrument Corp., Lansing, Mich.). (Tech Order AN 10-10AC-4). Jun 1947. 28 p. Price: Microfilm-$1.50 - Photostat-$3.00

PB L 81799. U. S. ARMY AIR FORCES. Overhaul instructions for Magnesyn oil pressure system Army type P-1 (Eclipse-Pioneer). (Tech Order AN 05-70D-3). Jul 1947. 36 p. Price: Microfilm-$1.75 - Photostat-$4.00

REGISTER OF PATENTS AVAILABLE FOR LICENSING OR SALE

Information on the following patents can be obtained from the U. S. Patent Office, Washington 25, D. C.

The "Groups" appearing after the patent abstracts are based on the Standard Industrial Classification Manual, Vol. I, Manufacturing Industries, Executive Office of the President, Bureau of the Budget.

Official Gazette, April 20, 1948

PAT. 2,434,855. Process of coating metal articles. Patented Jan 20, 1948.
A plating composition in dry powder form for metal objects which produces a coating having the appearance and wearing qualities of good nickel plating applied by ordinary methods. Metal objects to be plated are rubbed with a wet rag sprinkled with the powder. Several layers may be built up and a high brilliancy obtained by further polishing with a wheel or rouge. Various compositions are given in which ferrous chloride, stannous chloride, powdered metallic zinc, potassium bitartrate, ammonium chloride, sodium chloride, nickel sulphate, copper sulphate, and nickel ammonium sulphate are the ingredients. The composition will keep for several months and may be packed in jars or airtight bags. (Owner) Jose L. Teran Kosterlitzky, Apartado 674, Guadalajara, Mexico. Group 34--72. Reg. No. 9,497.

PAT. 2,002,291. Connecter element. Patented May 21, 1935.
This patent shows a connecter element which may be constructed as a plug or plug receptacle. As a plug, the device has a hollow head and a clamping portion, both of insulating material, which are threadedly fitted together. L-shaped blades are held between the two parts, the blades having an opening and slot at the inner end which receive the lead wires. The use of binding screws is eliminated and the plug may be assembled without the use of tools. The construction of the plug receptacle is somewhat similar. (Owner) C. D. Wood Electric Co., Inc., 70--17 83rd St., Glendale, Long Island, N. Y. Group 36--11. Reg. No. 9,498.

PAT. 2,433,664. Fuel pump. Patented Dec 30, 1947.
Fuel pump has a sectional cylindrical fuel reservoir with a plurality of parallel pumping cylinders formed on the lowermost portion of the reservoir at right angles thereto. The pistons are connected to plungers which are actuated by cam taps on a cam shaft. A hollow cylindrical rotary valve fitting snugly inside reservoir is provided with a plurality of ports, each adapted to register with a group of spaced ports in each cylinder. The valve may be manually adjusted to regulate the amount of fuel delivered into the cylinders to control engine speed. Hand-controlled pawls are provided for selectively holding the pistons in forward inoperative position to render any one or more pumping cylinders inactive. Each pawl is adapted to engage and disengage a collar below a spring surrounding each plunger. (Owner) George Hantjopoulos. Address correspondence to Victor J. Evans & Co., Merlin Bldg., 1503 21st St., N.W., Washington 6, D. C. Group 35--19. Reg. No. 9,499.

PAT. 2,429,879. Wood-turning lathe clamp. Patented Oct 28, 1947.
Clamp consists of a pair of adjacent plates connected for independent coaxial rotation. Radiating arms on one plate are pivotally connected at their outer ends to a like number of radiating arms pivoted to the other plate. Hook-shaped rim-engaging clamps are carried by the united ends of the arms. Provision is made for maintaining the plates in any one of a desired plurality of rotary relationships. With this clamp, partly finished bowls or the like may be reversed and a bead formed on the underside. (Owner) Valentine Gwatkin, 123 Humboldt Ave., St. Vital, Manitoba, Canada. Group 35--69. Reg. No. 9,500

PAT. 2,433,159. Copyholder for holding books or sheets. Patented Dec 23, 1947.
Copyholder may be used to support single sheets, books, manuscripts, or the like in proper position in back of a typewriter for copying. Line guides are provided to facilitate copying. Adjustment for proper line spacing may be made when holder is initially set. During copying, a key located adjacent typewriter keyboard is depressed to effect upward line by line movement of the sheet. A book is set for copying by placing it on a supporting platform in open position with the pages held flat by a yieldable clamping bar. A book line guide is then adjusted to underlie first line to be copied. By shifting a clutch the same key is used during copying to effect downward line by line movement of the book line guide. Shifting a lever adjacent the key reverses the actuating mechanism so that reverse movement to either the rollers or book line guide is effected when the same key is depressed. (Owner) Luis Alberto Villafuerte Rozas. Address correspondence to Victor J. Evans & Co., Merlin Bldg., 1503 21st St., N. W., Washington 6, D. C. Group 35--72. Reg. No. 9,501.

The following eight patents are owned by Thomas J. Hoy, 839 South 13th St., Newark 8, N. J.

PAT. 2,243,863. Poppet valve. Patented Jun 3, 1941.
Groups 33--66; 35--11; 37--11-12. Reg. No. 9,502.

PAT. 2,243,864. Cylinder casting or cylinder block for steam engines and the like. Patented Jun 3, 1941.
Groups 33--66; 35--11; 37--11-12. Reg. No. 9,503.

These two patents show double seating poppet valve construction having inlet and exhaust poppet valve cages with double seats. Cylinder construction for locomotive steam engines or the like is also shown. Positive steam-tight seatings are assured regardless of distortions caused by temperature changes, etc. The cages and poppet valve are each constructed with inner resilient valve seats. Individual restraining rings limit upward movement of these seats. The poppet valve (as shown in Patent 2,243,863) has its inner seat resiliently connected (in a steam-tight manner by resilient bellows) to a ring-like projection of an adapter, permitting removal of valve and adapter as a unit from steam chest. The cages are likewise connected to the surrounding cylinder by resilient metallic bellows and detachable retaining rings, permitting removal of cages and bellows as a unit. The valves and cages may be adapted for use with conventional structures.

PAT. 2,243,865. Power reverse gear for steam locomotives and the like. Patented Jun 3, 1941.
In this patent two or more sets of valve gear reversing mechanisms are coordinated by means of a variable ratio transmission actuated through a single manual control in locomotive cab. The transmission includes a threaded shaft connected by a propeller shaft to a reversible motor in cab, an elongated sliding cam-nut threaded on the shaft, a cam roller engaging cam, and a fulcrumed lever having three arms. One arm carries the cam roller and another arm is connected to a steam or air actuated piston. The third arm is connected by linkage comprising an arm and rod to one reversing shaft, and the cam-nut is likewise connected to another reversing shaft. The lever maintains the cam roller in contact with the profile of the cam-nut at all times regardless of wear, thus eliminating lost motion. Groups 35--11; 37--11--12. Reg. No. 9,504.

PAT. 2,303,642. Pressure sealed coupling. Patented Dec 1, 1942.
Light, leak-proof, flexible coupling (or joint) for lines conveying gases or fluids under high pressure is sealed against leakage by line pressure. A ball member extending inside a socket is engaged on opposite sides of its center by a pair of spaced gaskets. The outer gasket is held in place, retaining the ball in the socket, by an adjustable ferrule cap threaded on the outer end of the socket. A resilient metallic bellows is pre-loaded to exert force on the inner gasket to seal the joint. Line pressure tends to expand the bellows, causing it to exert increased pressure upon the inner gasket. Thus the greater the pressure, the more effective the seal. The space between the gaskets may be filled with a lubricant. Modifications shown. Groups 35--66-69; 37--22. Reg. No. 9,505.

PAT. 2,375,992. Tire construction. Patented May 15, 1945.
Vehicle tire may be formed with resilient metallic side walls connected to spaced inner and outer annular metallic members. An annular sheet of rubber is provided with a thread surface and secured around the outer member. The inner member is designed to fit the rim of a wheel. Each side wall comprises a series of leaves in superimposed spaced relation with contacting edges connected in a fluid-tight manner to form a plurality of integral flexible hinges. The ends of the innermost and outermost leaves of each side wall are welded to the inner and outer annular members to form a fluid-tight chamber. Modifications shown. Groups 30--11; 38--31. Reg. No. 9,506.

PAT. 2,381,541. Resilient valve head. Patented Aug 7, 1945.
Resilient valve head construction for internal combustion engines, steam engines, and the like, designed to obviate the necessity of providing tappet clearance and to automatically compensate for wear on the valve-actuating cam. The valve head is resilient and comparatively thick. It comprises a disc formed of flexible corrugated material with a rigid valve seating ring welded to the periphery of the disc. The valve may be used with structures having either a rigid or resilient seat. The resilient seat may comprise a rigid ring on a bellows-like mounting. A modification shows a double seating valve having a flexible head and a smaller rigid head adapted to cooperate with structures having a flexible valve seat and a rigid valve seat. Other modifications shown. Group 35--11--19--66--69. Reg. No. 9,507.

PAT. 2,427,456. Joint. Patented Sep 16, 1947.
Leak-proof, flexible joint (or coupling) for use in lines conveying hot gases or fluids under high pressure is sealed by line pressure. A semi-spherical ball portion and a socket portion of the joint cooperate to form relatively movable nested bearing surfaces to lend flexibility to the joint. A continuous fluid-tight passage is formed through the center of the joint so that hot gases or fluids cannot contact the nested bearing surfaces. A tubular resilient metallic bellows (which forms a major portion of the fluid-tight passage) is pre-loaded to exert pressure against a gasket-retaining ring designed to force a gasket into sealing engagement with the outer surface of the ring and the inner surface of the ball member. Line pressure tends to expand the bellows, causing it to exert increased force against the ring and gasket. A chamber surrounding the bellows may be filled with a lubricant. A modification is shown. Groups 35--11--66--69; 37--22. Reg. No. 9,508.

PAT. 2,433,319. Journal lubricating device. Patented Dec 23, 1947.
Designed to maintain constant and even lubrication of locomotive journals at all times. The apparatus, which includes a cellar box adapted to contain a lubricant, may be provided with a pair of lubricating rollers. A concaved plate above the rollers for engaging a journal is recessed at the center to permit a peripheral portion of journal to project through recess for frictional engagement with the rollers. The curved sides of the concave plate engage opposite sides of the journal. The rollers and concaved plate are urged into contact with the journal at all times by resilient side and end members. Lubricant from a pump may be supplied to one side of journal through one side of the concaved plate with excess falling into reservoir surrounding rollers. The rollers pick up lubricant from reservoir and transmit it to the journal. Excess lubricant is then wiped from journal by the other side of the concaved plate. In place of the rollers absorbent waste material may be employed. Modifications shown. Group 37--11--12. Reg. No. 9,509.

PAT. 2,213,841. Hacksaw blade mounting. Patented Sep 3, 1940.
Attachment for conventional hacksaw frames provides for adjustment and replacement of a blade without removing the attachment from frame. The attachment includes a threaded sleeve keyed to one end of the frame against rotation while permitting longitudinal movement of the sleeve in the frame. A rod to which end of hacksaw blade is attached is rotatably and longitudinally mounted within the sleeve. Ratchet teeth on a nut on the outer end of the rod and the end of the sleeve (held in engagement by a spring) permit angular adjustment of the blade when the sleeve is loose, but prevent rotation when blade is taut. Modifications shown. (Owner) Charles Hubeck, Swiss Farm, Hackettstown, N. J. Group 33--54. Reg. No. 9,510.

PAT. 2,433,336. Manually operated overrunning clutch. Patented Dec 30, 1947. (Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757.)
One-way clutch is particularly useful for installation on a drive shaft for association with a pulley to drive additional machinery by means of an endless belt. The clutch consists of a collar, a sleeve concentrically surrounding the collar, and a pawl carried by the sleeve in an annular space between collar and sleeve. A rocking finger integral with pawl is provided for manually snapping the pawl into and out of engagement with a notch in the collar for effecting driving engagement and disengagement between collar and sleeve. The pawl is releasably held in either engaged or disengaged position by a single flexible blade which has one end connected to the sleeve and the other end connected to the free end of the pawl. (Owner) Madel A. Bordelon, 508 Frank Alley, Abbeville, La. Group 35--66. Reg. No. 9,511.

PAT. 2,434,161. Electrical control for multiple heating units in tubes. Patented Jan 6, 1948.
The life of this electronic tube is prolonged by the provision of several heating units or filaments and a switching mechanism which automatically changes a heating unit when one is broken or burned out. The switching mechanism is held under tension or released by the action of a bimetallic spring, automatically or manually controlled. A circuit arrangement which may be employed with the tube includes a small lamp bulb that glows when operation of the filament has been disrupted. (Owner) John H. Hemrighous, 1029 Wenonah Ave., Oak Park, Ill. Group 36--61. Reg. No. 9,512.

PAT. 2,434,698. Time division multiplex telephone system. Patented Jan 20, 1948.
Several telephone messages may be transmitted simultaneously over a pair of conductors by providing a different carrier wave for each message, or two different messages may be transmitted over a trunk line by reducing the period of time for equal portions of different messages and transmitting the portions by 24 volt power and 48 volt

power in rotation. The sound signals for the two messages are separated into equal portions and the duration for each portion reduced by about one-half. The transmission and reception of different messages in all telephone offices is synchronized by control signals developed by a master generator in one office and transmitted over trunk lines to all other offices in the system. (Owner) John H. Homrighous, 1029 Wenonah Ave., Oak Park, Ill. Group 36—62. Reg. No. 9,513.

PAT. 2,434,697. Time division multiplex telephone system. Patented Jan 20, 1948.
This patent provides a two-way trunk line telephone system for party lines in which two messages are transmitted simultaneously without overlapping. Each message is allotted an alternate period of time, the second conversation being transmitted during the period intervening between the first and second messages. The line from subscriber station to central office has a source of high and low potential direct current varied by a relay. The relay has a movable armature under control of an electromagnet which acts to select different portions of the signals that represent messages. The magnet, when energized, starts the relay, the circuit being closed by a pair of contact springs, one of which is actuated to engage the other by slight movement of the armature. The springs are released by a ratchet upon full movement of the armature to open the circuit. (Owner) Charles H. Homrighous, 1029 Wenonah Ave., Oak Park, Ill. Group 36—62. Reg. No. 9,514.

PAT. 2,435,337. Laminated insole for shoes. Patented Feb 3, 1948.
Cushion inner sole includes a flexible upper section which may be reversed at the discretion of the wearer to provide warmth in winter and cooling effect in summer. This upper section, formed of three bonded fabric plies of different materials, is detachably tied by cords to a comparatively thick base ply of soft rubber. (Owner) Alva Billingsley, P. O. Box 442, Lamesa, Tex. Groups 30—41; 32—41. Reg. No. 9,515.

PAT. 2,291,837. Electric connector plug. Patented Aug 4, 1942.
Sectionally constructed plug has a lower rectangular block in which a pocket is formed to receive a thin upper section. The upper section has a heart-shaped portion on the sides of which a pair of arcuate springs with a central protuberance are seated. Two L-shaped prongs fit the corners of the pocket and extend through slots in the block. The prongs are held in place by a serrated portion which meshes with corrugations of a pair of right-angled detents fixed to the bottom of the block. The protuberance of the springs fits a recess in each of the prongs to make contact. (Owner) Timothy J. Sheehan, 45 Meisel Ave., Springfield, N. J. Group 36—11. Reg. No. 9,516.

PAT. 1,963,438. Method and apparatus for producing film for projecting stereoscopic motion pictures. Patented Jun 19, 1934.
A stereoscopic effect is produced in motion pictures by recording alternate and adjacent slices or sections of right and left eye views. The arrangement further provides a series of vertical and translucent or opaque gratings or bars disposed in front of the screen on which the picture is projected. Those seated before the screen see the projected picture in stereoscopic relief in that each eye sees only the view intended for it. Standard size film is used, and special viewing glasses and other devices are unnecessary. (Owner) Elmer Greensfelder, Address correspondence to R. E. Meech, 626 Arch St., Meadville, Pa. Group 39—12. Reg. No. 9,517.

PAT. 2,039,406. Method of and apparatus for operating intelligence systems. Patented May 5, 1936.
This electrically or manually operated apparatus enables the blind to read ordinary newspapers, books, or handwritten material. Enlarged letters and words in actual outline are reproduced on a second page in raised dots that may be read with the fingertips. The page to be read is scanned by a narrow beam of light received by an opposed light-sensitive cell associated with an amplifier or relay. A magnetic switch, controlled by the amplifier, operates a punching mechanism that moves in direct relationship with the scanning unit. The punching mechanism includes a small hammer which strikes a thin metal or cardboard sheet to record a raised dot or perforation. The switch is closed when "black" type is scanned, remaining open for "white" portions of the page. Mechanism similar to a typewriter carriage is adapted to move the scanning and punching units back and forth across the page. (Owner) Elmer Greensfelder. Address correspondence to R. E. Meech, 626 Arch St., Meadville, Pa. Group 36—92. Reg. No. 9,518.

PAT. 2,430,514. Electric plug guide plate. Patented Nov 11, 1947.
A guide is formed between the double female sockets of an electric plug cover plate by a pair of ribs. The first rib is vertical and generally triangular in shape with its lower end merged with a smoothly rounded horizontal projecting second rib. The ribs define guide recesses adjacent the socket, to aid in locating socket openings in dark or not easily accessible places. (Owner) Edward H. Knauss, 72 Locust Ave., White Horse, Trenton 10, N. J. Group 36—11. Reg. No. 9,519.

Official Gazette, April 27, 1948

Swift & Company, which previously registered 443 patents (published in the Official Gazette for November 4, 11, 18, and 25, 1947), now places the following patents on the Register as being available for license. Inquiries concerning licenses under these patents may be directed to Swift & Company, Union Stock Yards, Chicago, Ill.

PAT. 2,406,163. Sausage linking machine. Patented Aug 20, 1946.
A string-cutting means for a machine for linking stuffed sausage casings. String delivered from a supply means is drawn tightly around the casing. The tying means includes a rotating ring to be driven around the casing while the casing is held stationary within the ring. A fixed shearing edge is placed in the path the string follows in being wrapped around the casing. A movable shearing edge is driven across the fixed edge at timed intervals in the tying cycle to sever the string. Means are associated with the fixed edge to direct the string around one end of the fixed edge during the wrapping cycle and draw the string across the fixed edge just as the knife is driven through its cutting stroke. Group 35—51. Reg. No. 9,520.

PAT. 2,412,113. Purifying of alkylolamides. Patented Dec 3, 1946.
A method of removing basic substances and other impurities from mixtures containing alkylolamides. The preferred practice includes the addition of a strong mineral acid in a small quantity of water to the reaction products of an alkylolamine and a glycerol ester of higher fatty acids which neutralizes all the basic impurities. The precipitate formed by the refining operation is insoluble in the alkylolamides and may be removed by filtration, decantation, or centrifugal separation. Group 28--89. Reg. No. 9,521.

PAT. 2,413,631. Whitening eggs. Patented Dec 31, 1946.
A method for whitening buff-colored egg shells without affecting the egg material. The eggs are immersed from 5 to 10 seconds in a solution containing an acid oxidizing agent and a small amount of a wetting agent, and are then washed while being brushed lightly. The brushing may be eliminated by subjecting the eggs to an acid or alkali neutralizing solution after the treatment. Group 28--89. Reg. No. 9,522.

PAT. 2,416,146. Refining fats and oils. Patented Feb 18, 1947.
A process for refining glyceride oils and fats containing gums, free fatty acids, and coloring matter. Produces an oil free from gums and having reduced color and fatty acid content. The oils are de-gummed with an aqueous medium and then treated with a solvent which dissolves the fatty acids. A dilute solution of caustic soda is mixed with the oil to neutralize the remaining free fatty acids, further reduce the color of the oil, and separate from the oil an aqueous phase containing soap and coloring matter. Group 28--89. Reg. No. 9,523.

PAT. 2,423,930. Cut-down device. Patented Jul 15, 1947.
An automatic device for cutting down a hog carcass from a conveyor trolley moving along a supporting rail suspended from the ceiling. The carcass is hung from a gambrel engaged behind the gam cord of each of the rear legs, the gambrel being removably attached to conveyor trolley. A knife is movably mounted on a frame above a landing table so as to sever the gam cord of one of the legs as the leg is driven over the knife by movement of the carcass along the rail. The leg is thus released from the gambrel and the carcass drops toward the landing table. The gambrel becomes unbalanced and is twisted free from other leg. Groups 25--41; 35--43--62. Reg. No. 9,524.

PAT. 2,427,840. Washing device. Patented Sep 23, 1947.
A vacuum device for cleaning and washing the fore-alimentary tract of killed poultry. A vacuum tube extends upwardly above the liquid level of a receptacle containing washing fluid. The bird to be cleaned is hung by its feet from a support and its mouth placed over the tube and pushed downwardly so tube is inserted in throat and crop. As the mouth of bird passes below fluid in receptacle, the flow of air through the tract into vacuum tube is cut off. The fluid in the receptacle is then subjected to the vacuum and caused to flow upwardly between outside of tube and inner wall of tract, washing loose particles through vacuum tube into the drain. Group 20--15. Reg. No. 9,525.

PAT. 2,430,849. Treatment of carcasses. Patented Nov 11, 1947.
A treatment for animal carcasses, particularly skinned beef, to improve the color, texture, and moisture content. A freshly skinned carcass is cooled to a temperature of about 50° to 70° F. under controlled high humidity, until the fat assumes a plastic consistency. The partially cooled carcass is then rolled with a rubber roller to press the blood from the fat. The freshly skinned carcass may have been clothed in either a single or double cloth. If a single cloth was used, it is removed after rolling and replaced with a fresh one. When two cloths are used, the outer one is removed after rolling, the inner cloth remaining. The carcass is then transferred to another cooler. Groups 20--11--12. Reg. No. 9,526.

PAT. 2,389,899. Building structure. Patented Nov 27, 1945.
This patent shows special fittings and connectors by means of which elongated structural elements (such as pipes) may be assembled to form a rigid framework. Some of the connectors are formed with openings, while others are formed with openings and sockets for receiving the pipes. The necessity of providing the sockets and openings with threads is eliminated, while the pipes are almost entirely devoid of threads. Each connector is formed with nut-receiving and -retaining pockets on the outside at suitable points. After insertion of a pipe in a connector, a nut threaded on the end of a screw (or bolt) is slid laterally into the pocket opposite the inserted pipe. The screw is then turned so that its shank will pass through the nut and a hole in the connector and engage the side of the inserted pipe in set-screw fashion. (Owner) Leonard Deddo, 57 East Chicago Ave., Palatine, Ill. Group 33--23--81. Reg. No. 9,527.

PAT. 2,431,328. Respiroscope. Patented Nov 25, 1947. (Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757.)
This patent describes a device for observing respiratory patterns during surgery, clinical studies, and general diagnosis. The device provides a rotatable cylindrical fluorescent screen which surrounds an optical differential manometer. An airtight housing of the manometer encloses a diaphragm, the front wall of which is linked to a small mirror which is tilted back and forth as the diaphragm is caused to expand and contract. Light from an electric bulb in combination with a lens system is reflected by the mirror to the screen as an intense spot of light. The device is completed by a differential pressure device, the casing of which is divided into two chambers by a porous plate that establishes a pressure difference by resisting an inflowing gas stream. The chamber admitting the gas communicates with the diaphragm. The other chamber communicates with the interior of the manometer housing and with the gas mask worn by a person whose respiration is being studied. In use, the spot of light is seen as a streak which traces a curve across the center area of the slowly rotating screen. (Owner) Wayland E. Hull, 617 Ruby St., Durham, N. C. Group 39--15. Reg. No. 9,528.

PAT. 2,306,014. Animal toilet. Patented Dec 22, 1942.
Toilet consists of an outer pan in the form of a tray which serves as a base and an inner pan, smaller and deeper. The inner pan is covered by an inverted pan having an oval central opening, the edges of the inverted pan fitting close against the sides of the base. The parts

may be easily separated and cleaned. (Owner) Beatrice Carson, P. O. Box 129, Washington, D. C. Group 33--71. Reg. No. 9,529.

PAT. 2,204,392. Hose and pipe coupler. Patented Jun 11, 1940.
Coupler has a pair of interlocking sections having rounded hooks, the axial movement of which is limited by an overlying cover formed with offset lugs and notches which also lock. A thickened shoulder on the cover cooperates with a ring on each of the coupling sections to retain a spring, a thinner portion of the cover being bent to engage the outer face of the rings. The structure also includes a countersunk sleeve within each of the coupling sections. In connecting the coupling, the exposed hooks are brought together and the shanks (which connect the coupling to hose or pipe) are turned in opposite directions. The offset lugs of the cover ride on each other, forcing back the locking portion. A non-turning interlock is established by the snapping of the lugs into the notches. (Co-owner) Mary Mastowski, 336 Flatbush Ave., Brooklyn 17, N. Y. Group 35--69. Reg. No. 9,530.

PAT. 2,430,297. Bathtub cleaning means. Patented Nov 4, 1947.
Bathtub is formed with an integral water chamber around its top for connection to hot and cold water pipes. A series of special nozzles are connected to the chamber to discharge water from the chamber in a flat sheet-like spray against inner walls of tub to keep it clean. A corrugated handrail is detachably mounted over the chamber. (Owner) Leo Lombardi, 375 Columbia Ave., Los Angeles 13, Calif. Group 33--61. Reg. No. 9,531.

PAT. 2,430,011. Plug ejector. Patented Nov 4, 1947. (Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757.)
Multiple terminal plugs (such as the Jones plug which has 30 or more terminals) are difficult to remove from the socket board into which a plug is inserted without twisting or loosening the terminals. This difficulty is simplified by a springed double tong arrangement which bridges the top of the plug and is permanently pivoted to each side. The plug is easily removed by pressing the center bars of the tong together so that their free ends abut against the surface of the socket, forcing the plug outwardly. The tongs are flat and special provision is made so that the arrangement does not interfere with the cable leading into the plug. (Owner) Lunceford F. Gillentine, Herrando, Miss. Group 36--11. Reg. No. 9,532.

PAT. 2,432,144. Toolholder and lock. Patented Dec 9, 1947.
A tool-retaining means manufactured as an attachment for a pneumatically actuated hammer or incorporated in the hammer part of the tool-holding and -locking means. The tool is automatically locked in position when inserted in the holders, and accidental withdrawal prevented. A housing has an opening at one end for receiving the hammer and an opening at other end for receiving rearward part of the tool. To release tool, a slight turn of a sleeve causes cam means to push against end of arms, swinging them outwardly so the tool is free for withdrawal. (Owner) Irving A. Elkins, 175 Blake Ave., Brooklyn 12, N. Y. Group 35--42--69. Reg. No. 9,533.

PAT. 2,254,340. Valve. Patented Sep 2, 1941. Reg. No. 9,534.

PAT. 2,254,341. Lubricating method and apparatus therefor. Patented Sep 2, 1941. Reg. No. 9,535.

The two patents listed above relate to a system for distributing lubricant in measured quantities between bearing surfaces over the entire contact area. A lubricant-compressing plug is screwed in a central cylindrical aperture in stem of plug. Lubricant in lower portion of passage is compressed in response to downward movement of the screw plug and forced to the bearing surfaces of the valve. The lower end of passage terminates in a cylindrical chamber which fits in a split sleeve. Leading therefrom, at 90° intervals, are four lubricant ducts, which extend to recesses in the bearing surface of the plug. The sleeve is automatically rotated in response to rotation of the screw plug, moving the slot in sleeve past the ducts and delivering a small quantity of the lubricant to each duct. (Owners) Nina D. Zaikowsky and Samuel S. Mackeown. Address correspondence to Read C. Lawlor, Park Central Bldg., 412 West Sixth St., Los Angeles 14, Calif. Group 33--66.

PAT. 2,434,640. Machine for stripping covered cables. Patented Jan 20, 1948.
Cable is fed between rolls made up of a series of pairs of opposed discs. Discs have a roughened groove which forms a circular passage adapted to receive the covered cable to be stripped. The rims of the discs are provided with scalloped flanges sharpened to constitute knife edges. The flanges are so arranged that, when covered cable passes between the rolls, the knife edges of opposed flanges cut into the cover from opposite directions tearing a strip from the cable so that the remaining portion of the cover may be easily removed from the cable. The rolls are rotated by motor-driven gearing housed within a hollow standard. (Owner) Howard A. Burdwood, 60 Garrison St., Portland 4, Maine. Group 35--43. Reg. No. 9,536.

PAT. 2,435,485. Overshoe seamed to stiffen plastic upper. Patented Feb 3, 1948.
Light-weight overshoe has lower rubber portion and an upper of transparent plastic material which is closed by a slide fastener extending down to top of lower portion. The smooth nature of the material enables both inside and outside of overshoe to be cleaned by wiping. The parts of the overshoe may be welded or cemented together, the upper portion requiring no additional stiffening in that the slide fastener and an overlapped seam at the rear provide sufficient stiffening in themselves. (Owner) Evalyn Wheaton, 14-C Boulevard Bldg., 7310 Woodward Ave., Detroit 2, Mich. Groups 28--83; 30--21. Reg. No. 9,537.

PAT. 2,416,402. Tandem carrier. Patented Feb 25, 1947. Group 37—41. Reg. No. 9,538.

PAT. 2,420,028. Collapsible one-wheeled carrier. Patented Oct 14, 1947 Group 37—41. Reg. No. 9,539.

These two patents describe a one-wheeled carrier frame adapted for hunters, fishermen, etc., for transporting packs over rough ground. The carrier in Patent 2,416,402 consists of a tubular frame having a slidable handle in each corner and a center bar secured at the ends. A wheel is mounted in a fork braced to the underside of the center bar and to each corner of the frame. Lattice webbing covers the frame. In Patent 2,420,028, the frame is hinged to form a pair of drop leaves. This enables the carrier to be collapsed when not in use. A sizable load may be carried with little effort by two men grasping the handles at each end and balancing the load on the wheel and pushing the carrier. (Owner) James C. Neeley, Route 6, Box 861, Portland 1, Oreg.

PAT. 2,350,623. Combination basting and skewering device. Patented Jun 6, 1944.
Baster includes a hollow tube centered on a base which is adapted to rest on the bottom of any conventional roasting pan. The tube has several openings on the top as well as a pointed plug with which to impale the meat. The base has a central raised portion which constitutes a thermal chamber that accelerates the boiling of the meat juices so that the juices rise in the tube and squirt out the top openings to continuously baste the meat. A platform may be provided on the base to raise the meat out of contact with the bottom of the pan. Meat may be cooked at higher temperature without danger of burning or drying out. (Owner) Charles H. Kruea, 40 Indiana Ave., Fort Thomas, Ky. Groups 33—73; 34—41. Reg. No. 9,540.

PAT. 2,323,009. Photographic apparatus in detached parts. Patented Jun 29, 1943.
This patent presents the construction of a complete camera to be sold in knock-down form which may be assembled in accordance with printed directions. Interfitting parts are connected without screws or fastenings of any kind. The purpose of selling the camera in knock-down condition is to enable the buyer to acquire an intimate knowledge of the make-up of the camera so that he may understand the purpose of the parts and the functions they perform in the operation of the camera. The patent also presents a box in which the parts are to be packed. (Owner) Rolf Bie, c/o Bie Trading Co., 60 Broad St., New York 4, N. Y. Group 39—12. Reg. No. 9,541.

PAT. 2,435,447. Mooring bitt. Patented Feb 3, 1948.
A combined mooring bitt and chock structure for mounting on the deck of a vessel adjacent the side rail. Comprises a base with a pair of spaced upstanding bitts with an eccentric sheave rotatably mounted between them. A hawser passes around the sheave forming a spiral coil. A removable wedge is inserted in recess in lower end of either bitt co-acting with flat surface portion of bitt and with sheave to stopper hawser. (Owner) Karl Kortum, Ely Hill, Petaluma, Calif. Group 37—31. Reg. No. 9,542.

PAT. 2,392,324. Lamp shade. Patented Jan 8, 1946.
Open-ended lamp shade of flexible material is devoid of the usual frame and hanger so that it may be collapsed for laundering and cleaning, or for storage in a flat condition. The shade has an inner hem at top and bottom. An expansible split hoop or band is removably inserted in each hem to extend the shade and hold it taut. A detachable hanger having hooked terminal ends is also provided for engaging top of shade on inside to hold shade suspended from a standard fixture in usual manner. (Owner) Ernest Krebeck, 1242 Wisconsin Ave., N. W., Washington, D. C. Group 39—73. Reg. No. 9,543.

PAT. 2,430,021. Tie form. Patented Nov 4, 1947.
A tie form for holding a tie in fixed position on wearer. Comprises a vertically extending bowed wire bar with a keeper slidably mounted thereon supporting a transversely extending bowed wire bar. Loops formed at ends of bars have pointed ends for pushing in tie to hold tie in proper position. (Owner) Thomas O. Johnson, 609 38th St., Richmond, Calif. Groups 34—52; 40. Reg. No. 9,544.

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Government Owned Patent

The following patent, owned by the United States Government, as represented by the Secretary of the Interior, is available for licensing upon a non-exclusive, royalty-free basis:

PAT. 2,434,933. Transmission line flashover detector. Patented Jan 27, 1948. (Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757.)
This detector consists of an endless loop of wire having a multi-turn coil within which a cobalt steel link is held in an insulating case. The loop has a narrow bifurcation so that it may be bolted to the leg of a transmission tower at a readily accessible point not far from the ground. By removing the link and holding it near a compass a lineman may determine whether or not a lightning flashover has passed through tower. If the link is magnetized, a demagnetized link is substituted and inspection made of transmission line insulators for replacements or repairs if necessary. Group 36—11. Reg. No. 9,545.

PUBLICATIONS ISSUED

BY

OFFICE OF TECHNICAL SERVICES

PB L 86249. KENNEDY, S. J. and others. Areas of Quartermaster research in textiles. (QM Textile Series Rept 25) n. d. 47 p. Price: Multilith-$2.00
For abstract, see this Bibliography under "Textiles and Textile Products," v. 9, p. 141.

PB L 81662-R. U. S. OFFICE OF TECHNICAL SERVICES. Hot dip galvanizing. (Revision of PB 81662). (Tech Advisory Service Rept 26.7). Jan 1948. 6 p. Price: Mimeo-$0.10
This replaces PB L 81662, "Galvanizing by the hot zinc dipping process," listed in v. 7, p. 94, this Bibliography.

TRANSLATIONS

Items noted below are available at the prices quoted, from the translating service only. O. T. S. does not undertake to edit the reports nor does it accept the responsibility for the accuracy of the translations.

GER. PATENT 705144-T. ALSA A. G., LIESTAL, SWITZERLAND. Process for manufacturing tubular viscose filaments. (Translation of German Patent No. 705144, supplement to No. 701646). Jun 1934. 7 p. (Available from Research Information Service 509 Fifth Ave., New York 17, N. Y., $12.00).
For listing of original German patent, see this Bibliography, v. 5, p. 846.

PB 762-T. BERNDT. Scientific ZETKO exchange "2-ethyl hexanediol-1, 3 from crotonaldehyde." (Translation of PB 762). (Transervice Translation 33). Sep 1947. 3 p. (Available from Transervice, Box 647, Kingsport, Tenn., $3.00)
For abstract of original German report, see this Bibliography, v. 1, p. 33.

PB 774-T. CORELL. Scientific ZETKO exchange. "The preparation of acrylamides." (Translation of PB 774). (Transervice Translation 32). Sep 1947. 3 p. (Available from Transervice, Box 647, Kingsport, Tenn., $3.00).
For abstract of original German report, see this Bibliography, v. 1, p. 34.

PB 74390-T6. DÜRING, FRANZ and BOSTERS, HANS. Process and appliance for regulating the thread tension on ring spinning frames and ring twisters. (Translation of PB 74390, Frames 3909-3913). Feb 1948. 6 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $6.50).
For listing of original German report, see this Bibliography, v. 6, p. 1033.

PB 569-T. GILTAGES, H. A. Scientific ZETKO exchange. "The preparation of hexachlorobenzene and other perchloroaromatics." (Transervice Translation 38). Nov 1947. 4 p. (Available from Transervice, Box 647, Kingsport, Tenn., $3.00).
For abstract of original German report, see this Bibliography, v. 1, p. 50.

PB 74390-T5. GROSSER, G. F. AND CO., MARKERSDORF, GERMANY. Automatic stoppage of thread feed upon thread breakage in spinning and twisting machines. (Translation of PB 74390, Frames 3402-3409). Jan 1948. 9 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $10.75).
For listing of original German report, see this Bibliography, v. 6, p. 1029.

PB 74390-T3. HAMEL, CARL, A. G., SIEGMAR-SCHOENAU, GERMANY. Novel arrangement of ring rail for spinning and twisting machines. (Translation of PB 74390, Frames 3191-3195). Jan 1948. 6 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $6.00).
For listing of original German report, see this Bibliography, v. 6, p. 1028.

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For abstract of original German report, see this Bibliography, v. 3, p. 25.

PB 14961-T. HEYES, JOSEF and FISCHER, WILHELM A. Electrolytic polishing of steel. (Translation of PB 14961). May 1945. 20 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $21.00).
For abstract of original German report, see this Bibliography, v. 1, p. 936.

PB 753-T. HILPERT. Scientific ZETKO exchange. "Oxalic acid from sodium oxalate and hydrochloric acid." (Translation of PB 753). (Transervice Translation 40). Nov 1947. 7 p. (Available from Transervice, Box 647, Kingsport, Tenn., $3.00).
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PB 45446-T. I. G. FARBENINDUSTRIE A. G. Antistatic adhesive for temporary mounting of films on rigid bases. (Translation of PB 45446) Jan 1948. 4 p.
Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $4.00
For abstract of original German article, see this Bibliography, v. 4, p. 333.

PB 45559-T. I. G. FARBENINDUSTRIE A. G. Antistatic layers for photographic films. (Translation of PB 45559) Jan 1948. 7 p. Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $7.00
For abstract of original German article, see this Bibliography, v. 4, p. 344.

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For abstract of original German article, see this Bibliography, v. 4, p. 345.

PB 34591-T. I. G. FARBENINDUSTRIE A. G. Electronic device for reversing color negatives. (Translation of PB 34591) Dec 1947. 10 p. Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $16.50
For abstract of original German article, see this Bibliography, v. 3, p. 366.

PB 45499-T. I. G. FARBENINDUSTRIE A. G. Highly advantageous sensitizers for emulsions containing dye couplers. (Translation of PB 45499). Jan 1948. 17 p. (Available from Research Information Service, 509 Fifth Avenue, N.Y., 17, N. Y., $9.50).
For listing of original German report, see this Bibliography, v. 4, p. 338.

PB 34613-T. I. G. FARBENINDUSTRIE A. G. Improved imbibition process for producing color prints. (Translation of PB 34613) Dec 1947. 13 p. Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $17.50
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PB 34279-T. I. G. FARBENINDUSTRIE A. G. Manufacture of high polymeric, albuminoid, infusible polymerization products soluble in protein solvents. (Translation of PB 34279) Jan 1948. 6 p. Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $8.00
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PB 32537-T2. I. G. FARBENINDUSTRIE A. G. Manufacturing processes for dismulgans. (Translation of PB 32537, part IVa) Jan 1948. 7 p. Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $2.00
For abstract of PB 32537, a German reel on textile auxiliaries, see v. 3, p. 2, this Bibliography. A translation of another section of this reel, PB L 32537-T, "Manufacturing processes for soromins" is listed in v. 8, p. 184.

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For abstract of original German article, see this Bibliography, v. 3, p. 216.

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PB 75508-T. I. G. FARBENINDUSTRIE A. G. Process for the electrolytic separation of manganese. (Translation of PB 75508). Jan 1948. 5 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $6.00).
For listing of original German report, see this Bibliography, v. 6, p. 80.

PB 45457-T. I. G. FARBENINDUSTRIE A. G. Range finder for night photography. (Translation of PB 45457). Nov 1941. 12 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $19.00).
For listing of original German report, see this Bibliography, v. 4, p. 334.

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For abstract of original German reports, see this Bibliography, v. 3, p. 365 (PB 34570) and v. 3, p. 376 (PB 34689).

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The following three translated German patents may be purchased individually from Research Information Service, 509

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Fifth Avenue, New York 17, N. Y., or as a set. The price for the set of three is $40.00.

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GER. PATENT 718149-T. I. G. FARBENINDUSTRIE A. G. Modification of process for new vat dyes of high fastness to sunlight and weather. (Translation of German patent 718149) Jan 1948. 5 p. Price: $10.00

GER. PATENT 721332-T. I. G. FARBENINDUSTRIE A. G. Additional process for obtaining new fast red dyes. (Translation of German patent 721332) Jan 1948. 11 p. Price: $24.50

For information concerning original German patents, see this Bibliography, v. 5, p. 916. Patents 718149 and 721332 are additions to basic patent 715083.

PB 66743-T. I. G. FARBENINDUSTRIE A. G., LUDWIGSHAFEN, GERMANY. Process for desulfurizing pig-iron melts. (Translation of PB 66743). Mar 1941. 4 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $6.50).
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PB 565-T. MITTAG, R. Scientific ZETKO exchange. "Catalytic oxidation with air in liquid phase." III. Oxidation of polymethylbenzenes. (Translation of PB 565). (Transervice Translation 34). Oct 1947. 6 p. (Available from Transervice, Box 647, Kingsport, Tenn., $3.00).
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For abstract of original German report, see this Bibliography, v. 1, p. 49.

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For abstract of original German report, see this Bibliography, v. 1, p. 49.

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PB 74390-T7. SAECHSISCHE TEXTILMASCHINENFABRIK, CHEMNITZ, GERMANY. Spinning frames and twisters with vertically moving spindle rail. (Translation of PB 74390, Frames 3956-3961). Feb 1948. 8 p. (Available from Research Information Service, 509 Fifth Ave., New York 17, N. Y., $6.75).
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For listing of original German report, see this Bibliography, v. 5, p. 1147.

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For abstract of original German report, see this Bibliography, v. 1, p. 54.

PB 602-T. WOLDAN. Scientific ZETKO exchange. "Preparation of 2-methyl 5 ethyl pyridine." (Translation of PB 602). (Transervice Translation 31). Sep 1947. 5 p. (Available from Transervice, Box 647, Kingsport, Tenn., $1.00).
For abstract of original German report, see this Bibliography, v. 1, p. 43.

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For listing of original German report, see this Bibliography, v. 6, p. 1027.